LG

Life's Good

OWNER'S MANUAL

M197WD
M227WD
M237WD

Please read this manual carefully before operating your set.
Retain it for future reference.
Record model number and serial number of the set.
See the label attached on the back cover and quote this information to your dealer when you require service.

DVB
Digital Video Broadcasting

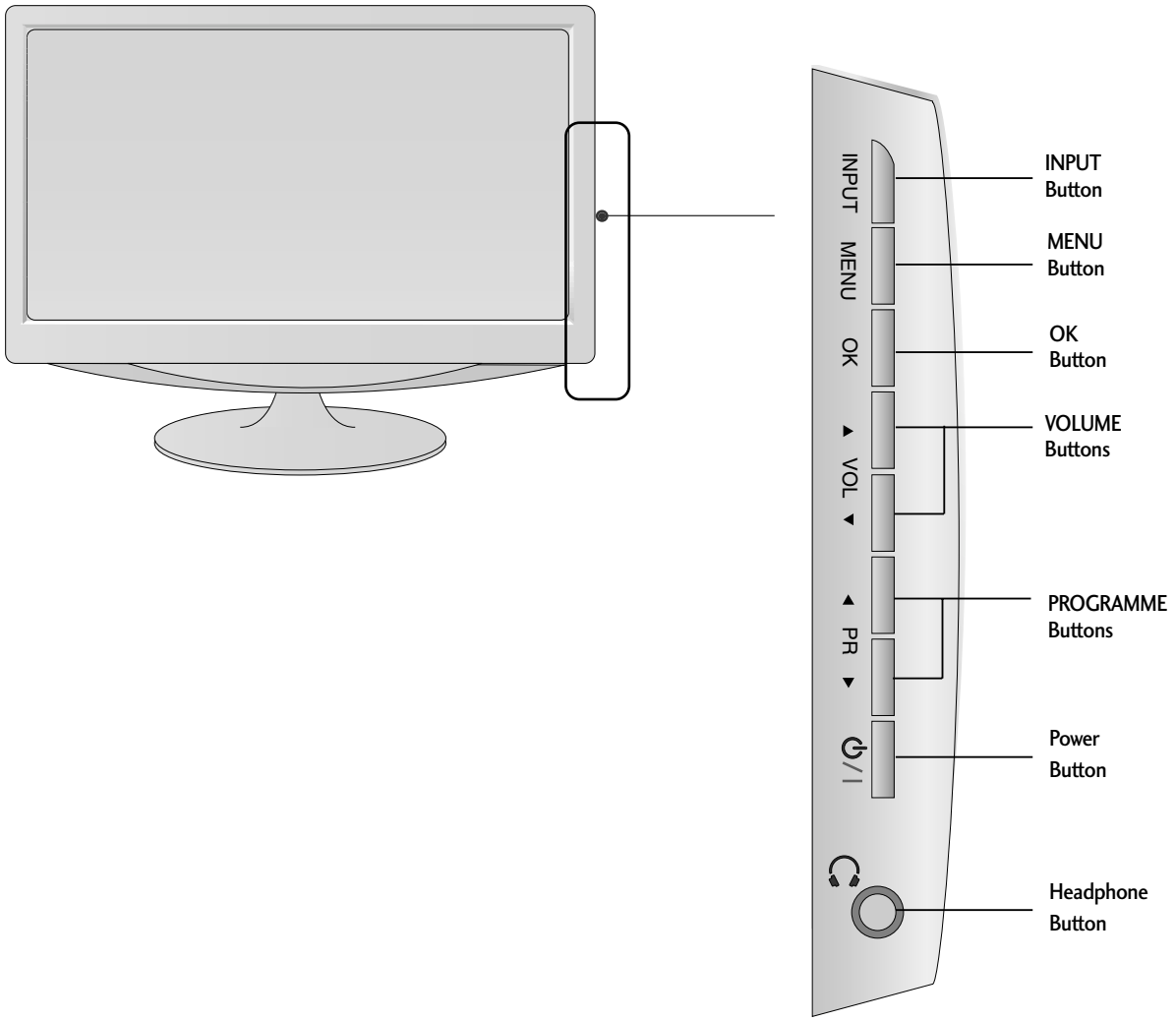
Trade Mark of the DVB Digital Video Broadcasting Project (1991 to 1996)

ID Number(s): 5741 : M227WD
5742 : M197WD
5890 : M237WD

PREPARATION

FRONT PANEL CONTROLS

- This is a simplified representation of the front panel. The image shown may be somewhat different from your set.



BACK PANEL INFORMATION

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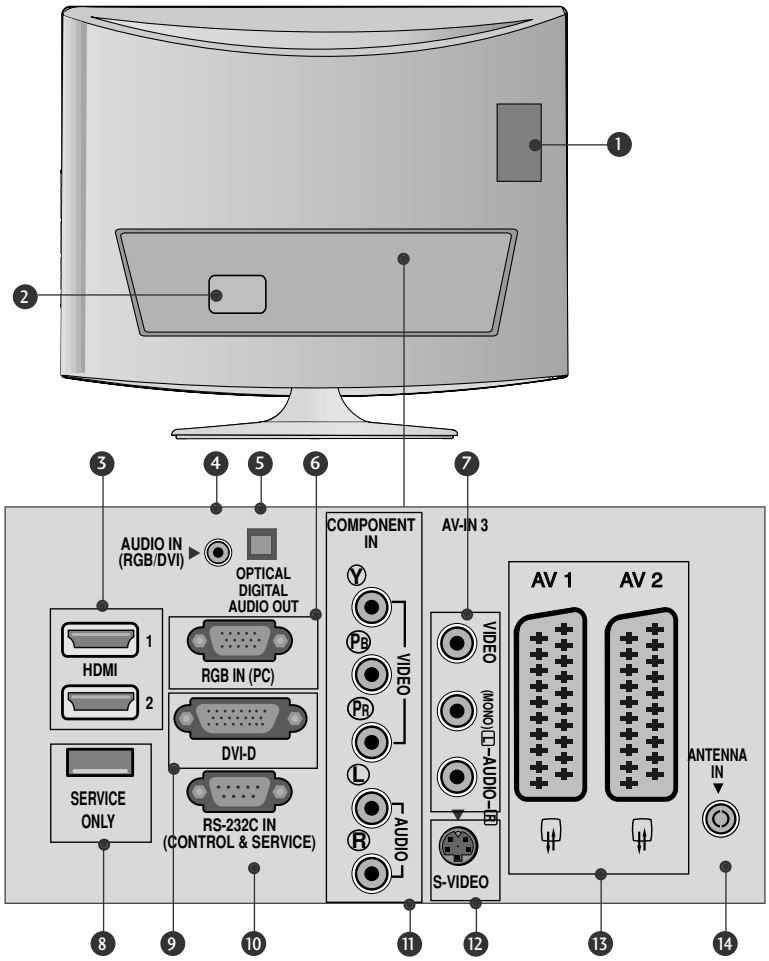

❶ PCMCIA (Personal Computer Memory Card International Association) Card Slot
(This feature is not available in all countries.)

❷ Power Cord Socket
This set operates on AC power. The voltage is indicated on the Specifications page. Never attempt to operate the set on DC power.

❸ HDMI Input
Connect a HDMI signal to HDMI IN.
Or DVI (VIDEO) signal to HDMI IN with DVI to HDMI cable.

❹ RGB/DVI Audio Input
Connect the audio from a PC.

❺ Optical Digital Audio Out
Connect digital audio from various types of eguipment

❻ RGB INPUT (PC)
Connect the output from a PC.

❼ Audio/Video Input
Connect audio/video output from an external device to these jacks.

❽ SERVICE ONLY PORT

❾ DVI-D Input
Connect the output from a PC.

❿ RS-232C IN (CONTROL & SERVICE) PORT
Connect to the RS-232C port on a PC.

⓫ Component Input
Connect a component video/audio device to these jacks.

⓬ S-Video Input
Connect S-Video out from an S-VIDEO device.

⓭ Euro Scart Socket (AV1/AV2)
Connect scart socket input or output from an external device to these jacks.

⓮ Antenna Input
Connect over-the-air signals to this jack.

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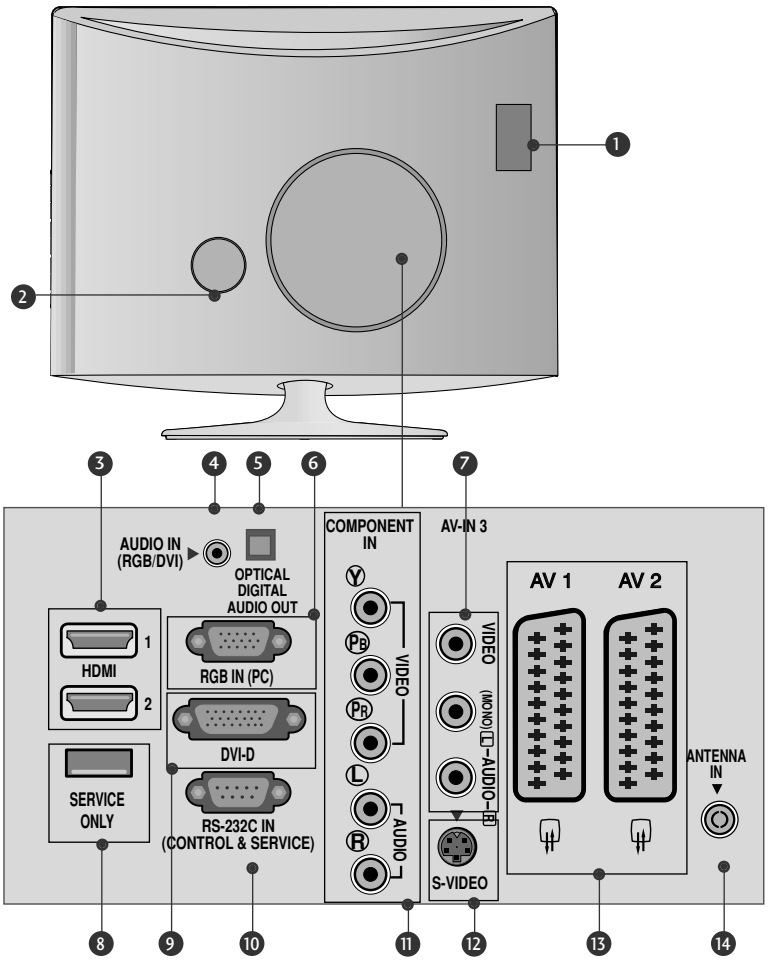

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STAND INSTALLATION

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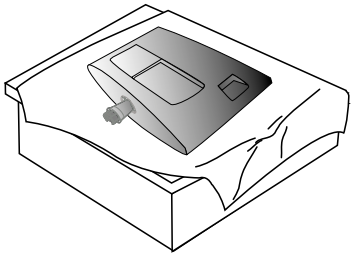
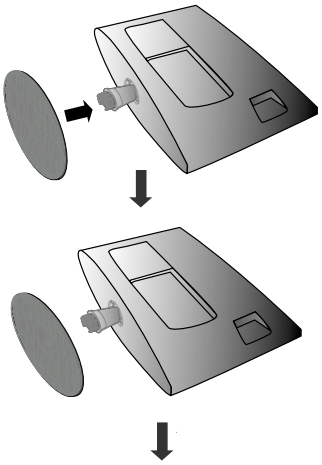
1 Carefully place the product screen side down on a cushioned surface that will protect product and screen from damage.

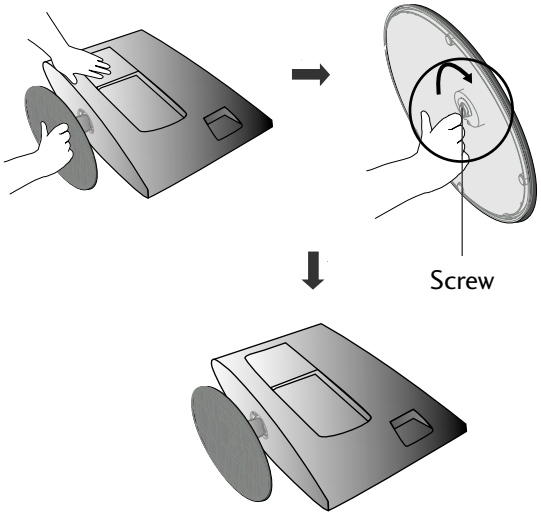


2 Insert the **stand base** into the product



3 Attach the monitor to the Stand Base by turning the screw to the right.

* Turn the screw by using the screw handle



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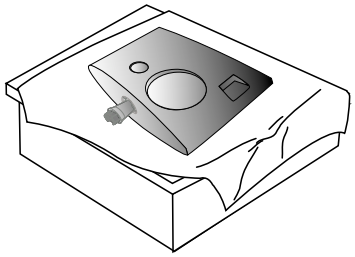

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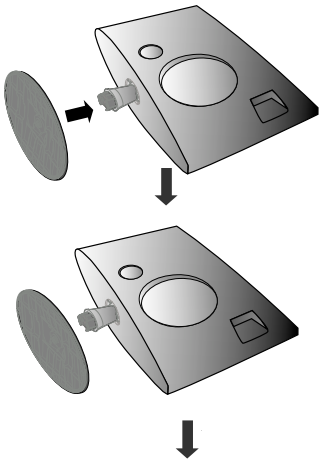

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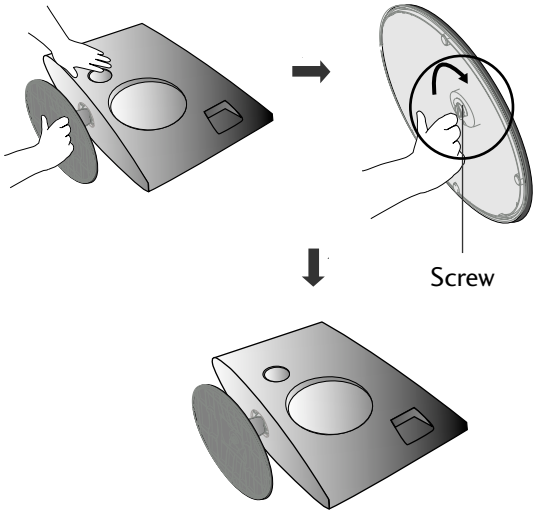

DETACHING STAND

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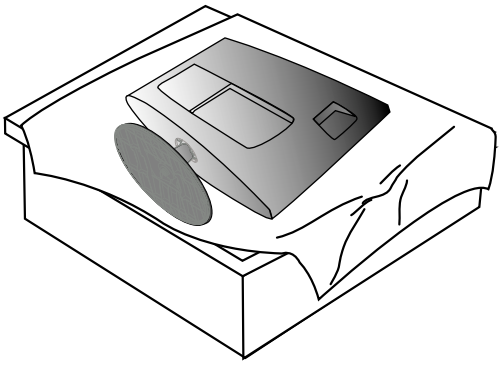
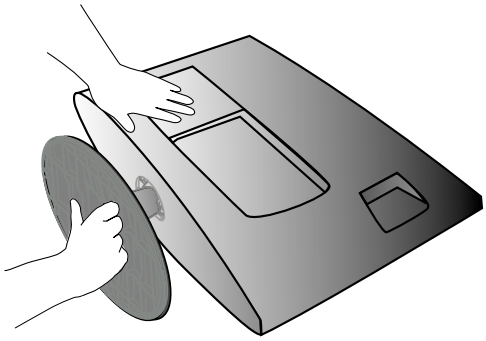
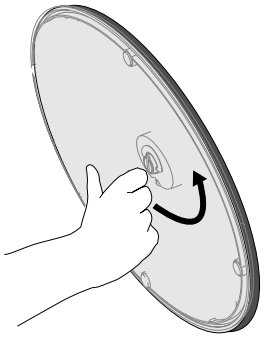
1 Place the set screen side down on a cushion or soft cloth.



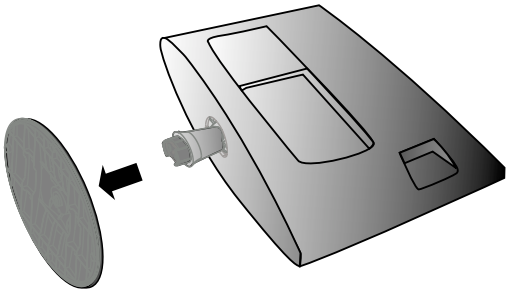
2 Detach the monitor to the Stand Base by turning the screw to the left.



3 Turn the screw by using the screw handle



4 Pull the stand base.



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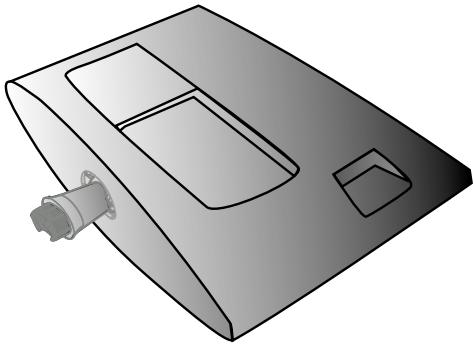

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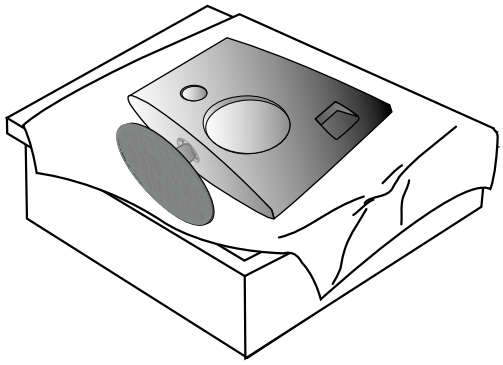

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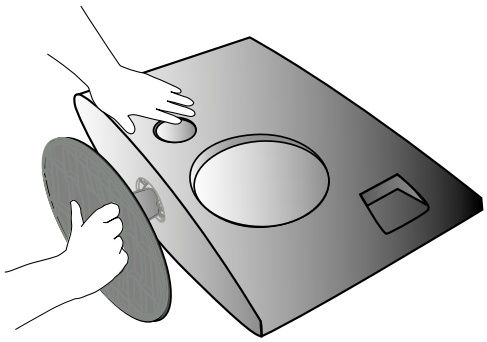

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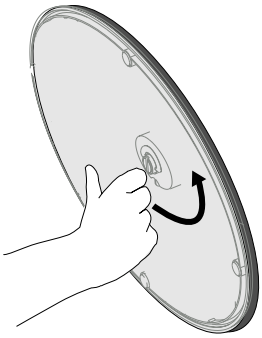

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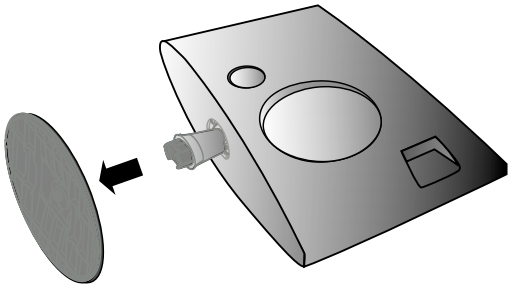

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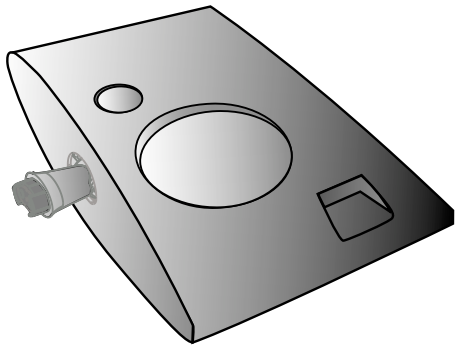
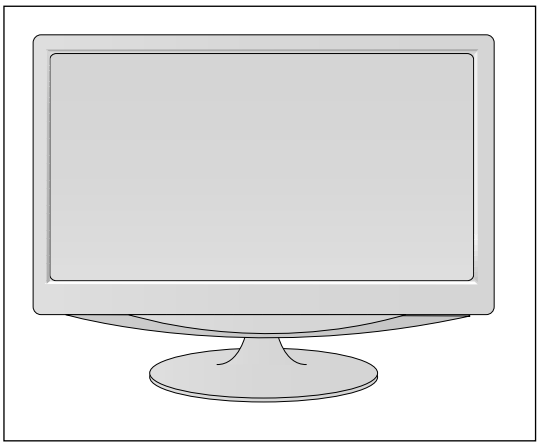
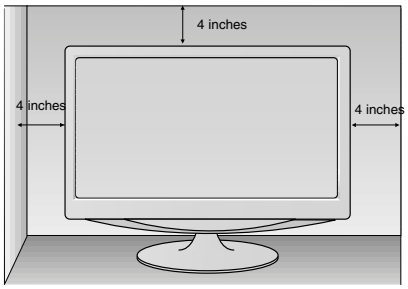
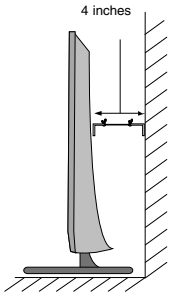


DESKTOP PEDESTAL INSTALLATION

For proper ventilation, allow a clearance of 4 inches on each side and from the wall.







PREPARATION

POSITIONING YOUR DISPLAY

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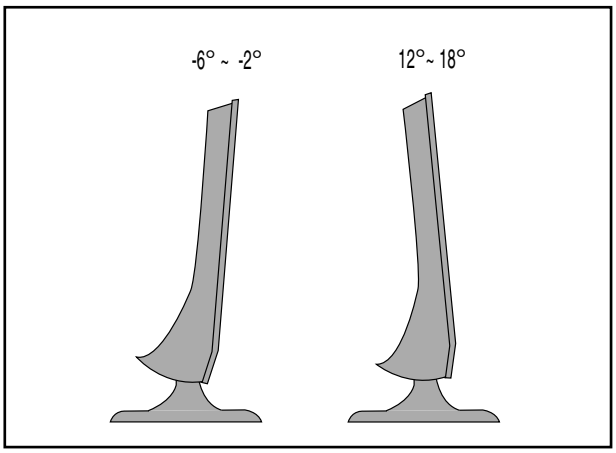
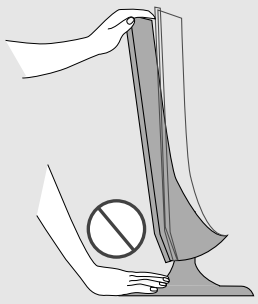
Adjust the position of the panel in various ways for maximum comfort.

- **Tilt range**



LOCATION

Position your set so that no bright light or sunlight falls directly onto the screen. Care should be taken not to expose the set to any unnecessary vibration, moisture, dust or heat. Also, ensure that the set is placed in a position to allow a free flow of air. Do not cover the ventilation openings on the back cover.
If you intend to mount the set to a wall, attach VESA standard mounting interface (optional parts) to the back of the set.
When you install the set using the wall mounting bracket (optional parts), attach it carefully so it will not drop.



Warning:
When adjusting the angle of the screen,do not put your finger(s)in between the head of the monitor and the stand body.You can hurt your finger(s).

KENSINGTON SECURITY SYSTEM

- The product is equipped with a Kensington Security System connector on the back panel. Connect the Kensington Security System cable as shown below.
- For detailed installation and use of the Kensington Security System, refer to the user's guide provided with the Kensington Security System.

  For further information, contact **http://www.kensington.com**, the internet homepage of the Kensington company. Kensington sells security systems for expensive electronic equipment such as notebook PCs and LCD projectors.

NOTE

- The Kensington Security System is an optional accessory.

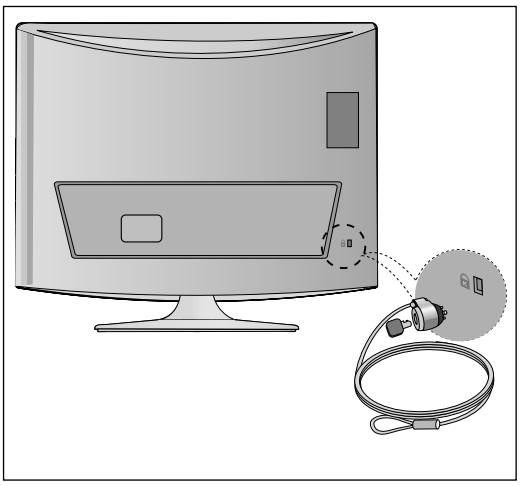
NOTES

a. If the product feels cold to the touch, there may be a small "flicker" when it is turned on.
   This is normal, there is nothing wrong with product.

b. Some minute dot defects may be visible on the screen, appearing as tiny red, green, or blue spots. However, they have no adverse effect on the monitor's performance.

c. Avoid touching the LCD screen or holding your finger(s) against it for long periods of time.
   Doing so may produce some temporary distortion effects on the screen.

<M197WD/M227WD>



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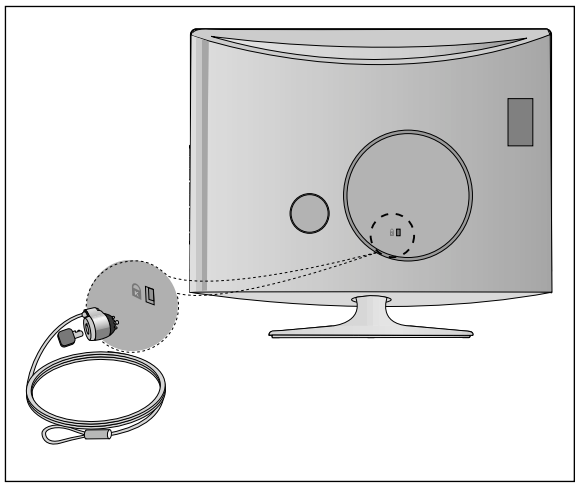
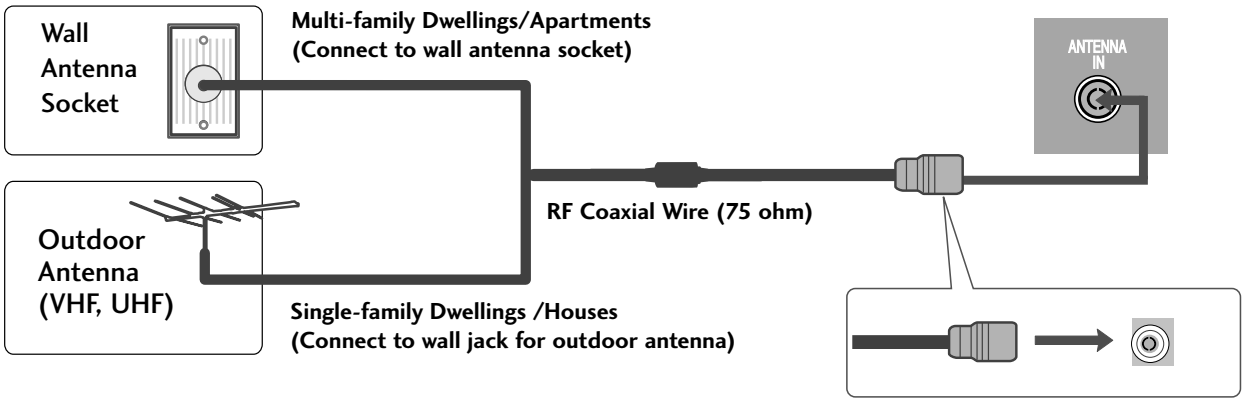


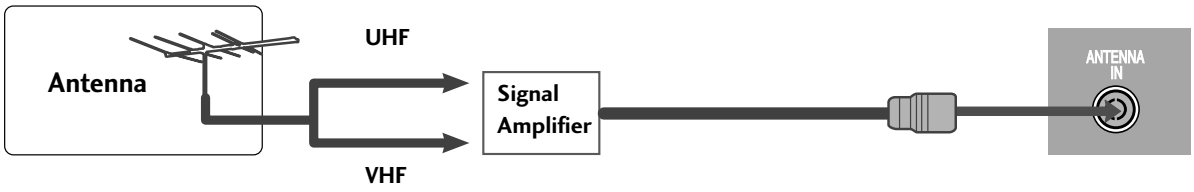
PREPARATION

- To prevent equipment damage, never plug in any power cords until you have finished connecting all equipment.

ANTENNA CONNECTION

- For optimum picture quality, adjust antenna direction.
- An antenna cable and converter are not supplied.





- In poor signal areas, to get better picture quality, install a signal amplifier to the antenna as shown above.
- If signal needs to be split for two TVs, use an antenna signal splitter for connection.

EXTERNAL EQUIPMENT SETUP

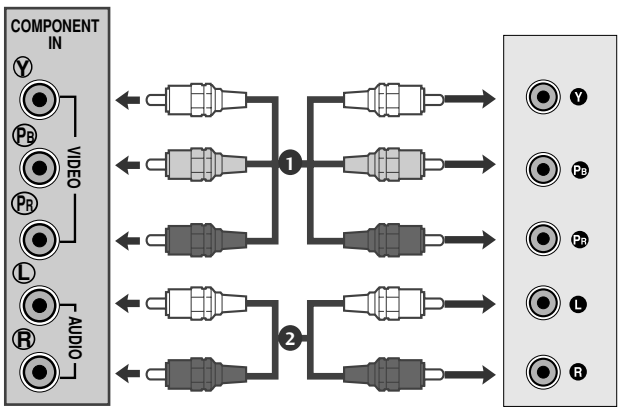
- To prevent the equipment damage, never plug in any power cords until you have finished connecting all equipment.
- The image shown may be somewhat different from your set.

HD RECEIVER SETUP

When connecting with a component cable

1. Connect the SET-TOP outputs to the **COMPONENT IN VIDEO** sockets (Y P_B P_R) on the set.
2. Connect the audio cable from the SET-TOP to **COMPONENT IN AUDIO** sockets of the set.
3. Press the **INPUT** button to select **Component.**

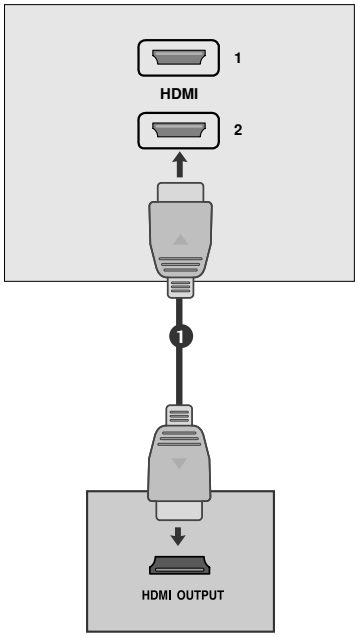
Signal	Component	HDMI
480i/576i	Yes	No
480p/576p	Yes	Yes
720p/1080i	Yes	Yes
1080p	Yes	Yes



EXTERNAL EQUIPMENT SETUP

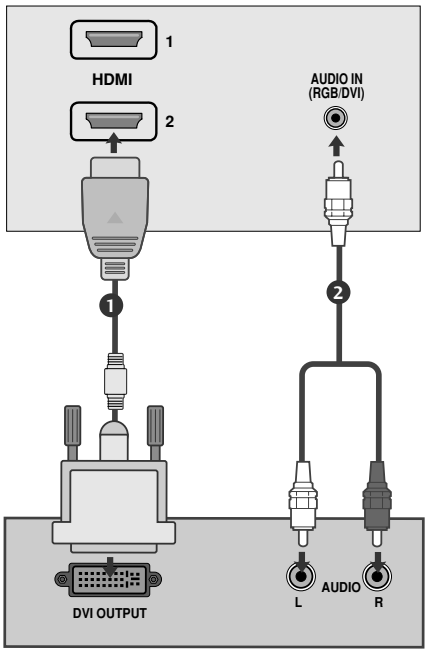
When connecting with a HDMI

1. Connect the HDMI output of the digital set-top box to the **HDMI IN** jack on the set.



When connecting with a HDMI to DVI cable

1. Connect the digital set-top box to **HDMI IN** jack on the set.
2. Connect the audio output of the digital set-top box to the **AUDIO IN (RGB/DVI)** jack on the set.
3. Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)



NOTE

► HDMI Input does not support PC mode. If it is connected PC, the screen may not be displayed properly.

EXTERNAL EQUIPMENT SETUP

DVD SETUP

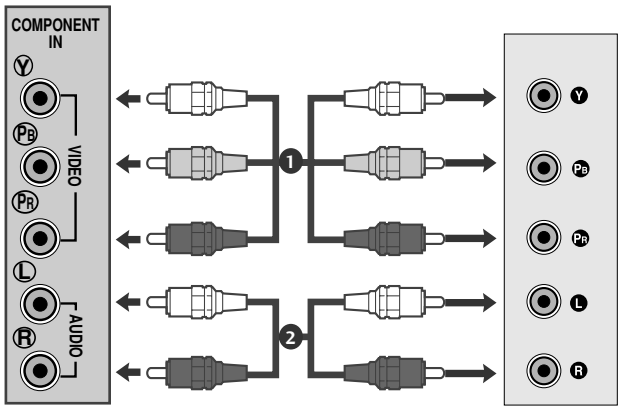
When connecting with a component cable

1. Connect the video output sockets (Y P_B P_R) of the DVD to the **COMPONENT IN VIDEO** sockets (Y P_B P_R) of the set.
2. Connect the audio cable from the DVD to **COMPONENT IN AUDIO** sockets of the set.
3. Press the **INPUT** button to select **Component**.
4. Press the **PLAY** button on the DVD.
   The DVD playback picture appears on the screen.

Component Input ports

To get better picture quality, connect a DVD player to the component input ports as shown below.

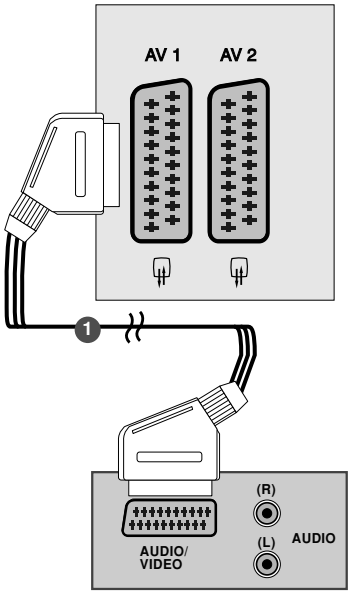
Component ports on the set	Y	P_B	P_R
Video output ports on DVD player	Y	P_B	P_R
	Y	B-Y	R-Y
	Y	Cb	Cr
	Y	Pb	Pr



EXTERNAL EQUIPMENT SETUP

When connecting with a Euro Scart

1. Connect the Euro scart socket of the DVD to the Euro scart socket of the set.
2. Press the **INPUT** button to select **AV1**.
   If connected to **AV2** Euro scart socket, select **AV2** input source.
3. Press the **PLAY** button on the DVD.
   The DVD playback picture appears on the screen.

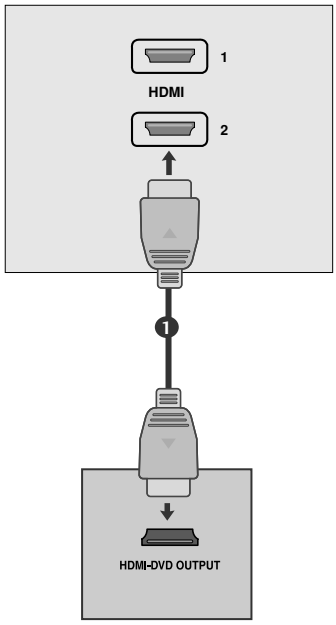


NOTE

- Signal type RGB, i.e. the signals red, green and blue can only be selected for the Euro scart and the AV 1 can be received. These signals are transmitted, for example, by a paid TV decoder, game machine or photo CD unit, etc.
- Please use shielded scart cable.

When connecting HDMI cable

1. Connect the HDMI output of the DVD to the **HDMI IN** jack on the set.



NOTE

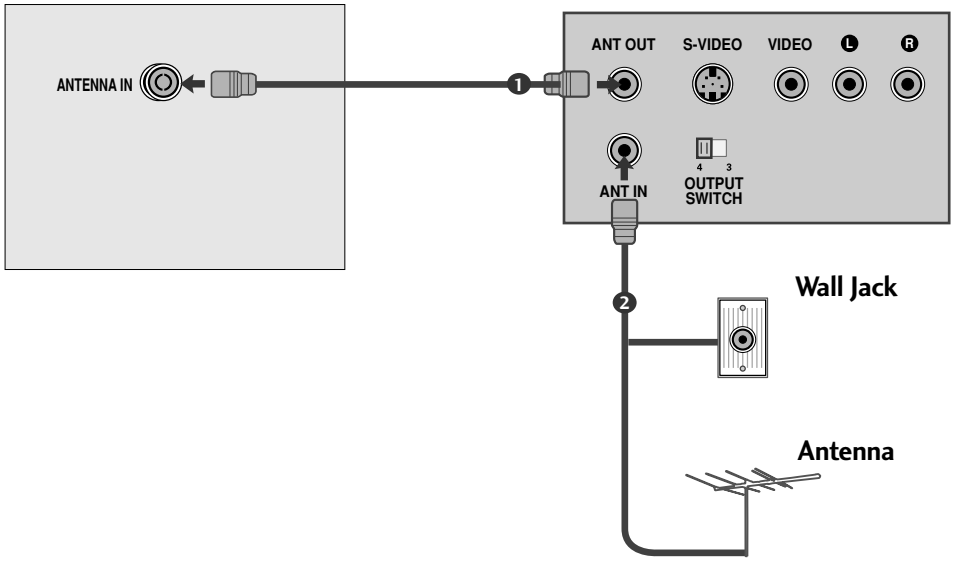
- Set can receive the video and audio signal simultaneously by using a HDMI cable.
- If the DVD player does not support Auto HDMI, you need to set the DVD output resolution appropriately.

EXTERNAL EQUIPMENT SETUP

VCR SETUP

- To avoid picture noise (interference), leave an adequate distance between the VCR and set.
- Typically a still picture is shown on the VCR. If a user uses 4:3 picture format for a long time, an afterimage may remain on the sides of the screen.

When connecting with an antenna

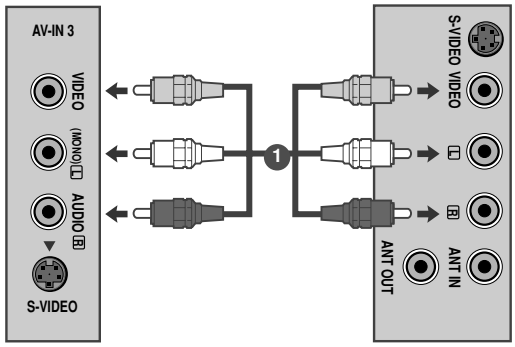


1. Connect the RF out socket of the VCR to the aerial socket of the set.
2. Connect the aerial cable to the RF aerial in socket of the VCR.
3. Store the VCR channel on a desired programme number using the 'Manual programme tuning' section.
4. Select the programme number where the VCR channel is stored.
5. Press the **PLAY** button on the VCR.

EXTERNAL EQUIPMENT SETUP

When connecting with a RCA cable

1. Connect the audio/video out sockets of the VCR to AUDIO/VIDEO in sockets of the set.
2. Press the INPUT button to select AV3.
3. Press the PLAY button on the VCR.
   The VCR playback picture appears on the screen.

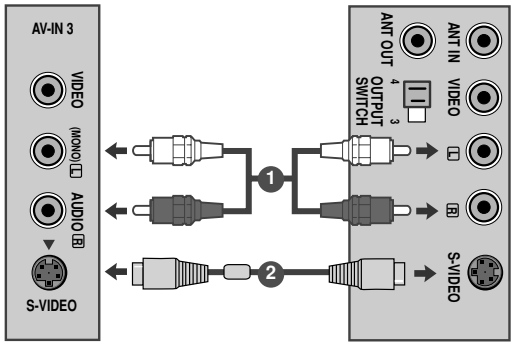


NOTE

► If you have a mono VCR, connect the audio cable from the VCR to the AUDIO L/MONO jack of the set.

When connecting with an S-Video cable

1. Connect the S-Video socket of the VCR to the S-VIDEO socket of the set.
2. Connect the audio cable from the S-VIDEO VCR to the AUDIO sockets of the set.
3. Press the INPUT button to select AV3.
4. Press the PLAY button on the VCR.
   The VCR playback picture appears on the screen.



EXTERNAL EQUIPMENT SETUP

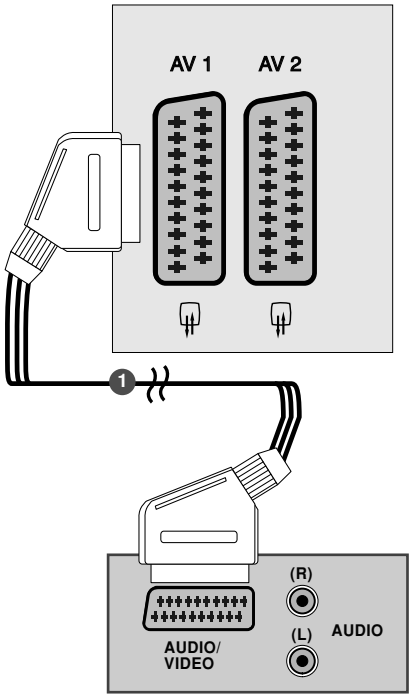
When connecting with a Euro Scart

1. Connect the Euro scart socket of the VCR to the Euro scart socket of the set.

2. Press the **PLAY** button on the VCR.
If your VCR outputs an AV switching signal via the Scart lead, the set will auto switch to **AV 1** mode on start of playback, but if you want to keep on watching in TV mode, press the ▲ / ▼ or NUMBER buttons.
If connected to **AV2** Euro scart socket, select **AV2** input source.

   Otherwise press the **INPUT** button on the remote control handset to select **AV 1**. The VCR playback picture appears on the screen.

   You can also record programmes received by the set on video tape.



NOTE

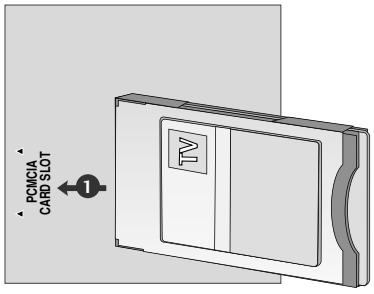
- Signal type RGB, i.e. the signals red, green and blue can only be selected for the Euro scart and the AV 1 can be received. These signals are transmitted, for example, by a paid TV decoder, game machine or photo CD unit, etc.
- Please use shielded scart cable.

INSERTION OF CI MODULE

- To view the scrambled (paid) services in digital TV mode.
- This feature is not available in all countries.

1. Insert the CI Module to **PCMCIA** (Personal Computer Memory Card International Association) **CARD SLOT** of set as shown.

   For further information, see p. 43.



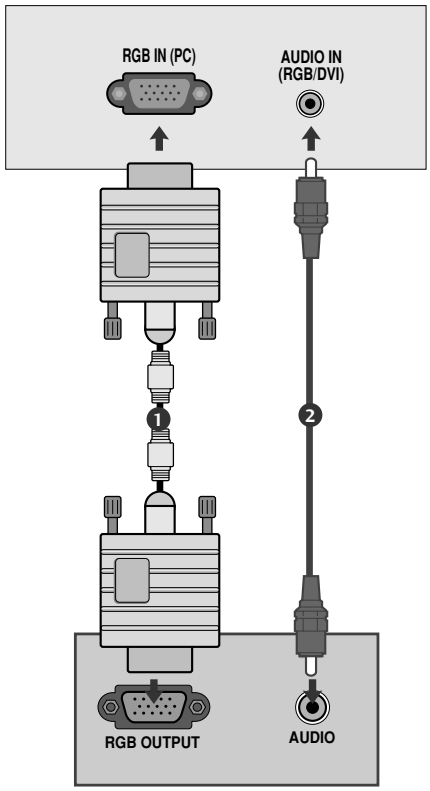
EXTERNAL EQUIPMENT SETUP

PC SETUP

This product provides Plug and Play capability, meaning that the PC adjusts automatically to the set's settings.

When connecting with a D-sub 15 pin cable

1. Connect the signal cable from the monitor output socket of the PERSONAL COMPUTER to the PC input socket of the set.
2. Connect the audio cable from the PC to the **AUDIO IN (RGB/DVI)** sockets of the set.
3. Press the INPUT button to select **RGB**.
4. Switch on the PC, and the PC screen appears on the set. The set can be operated as a PC monitor.



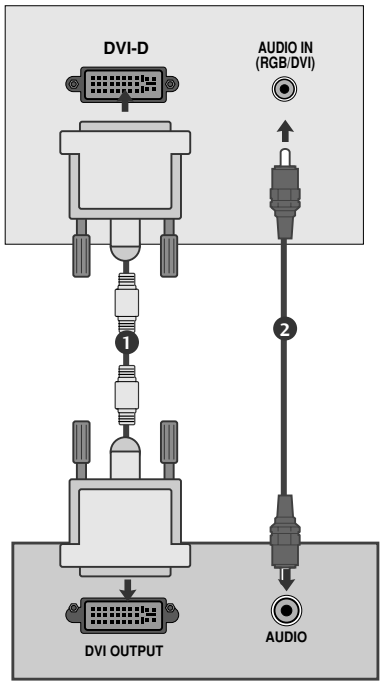
NOTE

► User must use shielded signal interface cables (D sub 15 pin cable, DVI cable) with ferrite cores to maintain standard compliance for the product.

EXTERNAL EQUIPMENT SETUP

When connecting with a DVI cable

1. Connect the DVI output of the PC to the **DVI-D IN** jack on the set.
2. Connect the audio cable from the PC to the **AUDIO IN (RGB/DVI)** sockets of the set.



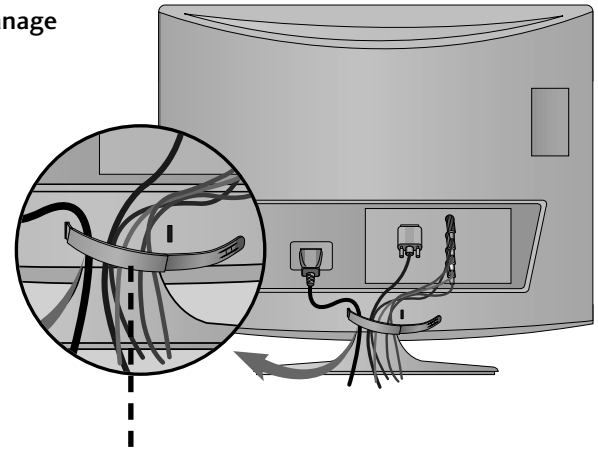
NOTE

- If the set is cold, there may be a small “flicker” when the set is switched on. This is normal, there is nothing wrong with the set.
- If possible, use the 1360x768@60Hz video mode to obtain the best image quality for your LCD monitor. If used with other resolutions, some scaled or processed pictures may appear on the screen. The set has been preadjusted to the mode 1360x768@60Hz.**(M197WD)**
- If possible, use the 1920x1080@60Hz video mode to obtain the best image quality for your LCD monitor. If used with other resolutions, some scaled or processed pictures may appear on the screen. The set has been preadjusted to the mode 1920x1080@60Hz.**(M227WD/M237WD)**
- Some dot defects may appear on the screen, like Red, Green or Blue spots. However, this will have no impact or effect on the monitor performance.
- Do not press the LCD screen with your finger for a long time as this may produce some temporary distortion effects on the screen.
- Avoid keeping a fixed image on the set’s screen for prolonged periods of time. The fixed image may become permanently imprinted on the screen; use a screen saver when possible.

BACK COVER FOR WIRE ARRANGEMENT

<M197WD/M227WD>

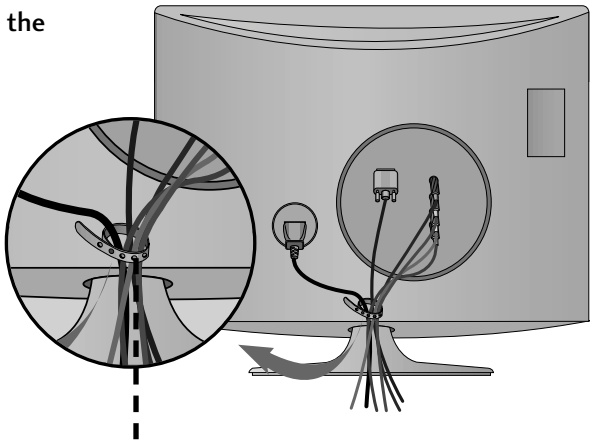
Open the cable management as shown and manage the cables. And Fit the cable management.



Cable management

<M237WD>

Tie cables together with a cable tie as shown in the illustration.



Cable tie

EXTERNAL EQUIPMENT SETUP

RGB/DVI[PC]

<M197WD>

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
720x400	31.468	70
640x480	31.469	60
	37.500	75
800x600	37.879	60
	46.875	75
1024x768	48.363	60
	60.123	75
1280x768	47.776	60
1360x768	47.712	60
1366x768	47.7	60

<M227WD/M237WD>

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
720x400	31.468	70
640x480	31.469	60
	37.500	75
800x600	37.879	60
	46.875	75
1024x768	48.363	60
	60.123	75
1152x864	67.500	75
1280x1024	63.981	60
	79.976	75
1680x1050	64.674	60
	65.290	60
1600x1200	75.000	60
1920x1080	66.587	60

HDMI[DTV] supported mode

<M197WD/M227WD/M237WD>

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
720x480/60p	31.47	60
	31.5	60
720x576/50p	31.25	50
1280x720/50p	37.5	50
1280x720/60p	44.96	60
	45	60
1920x1080/60i	33.72	60
	33.75	60
1920x1080/50i	28.125	50
1920x1080/50p	56.25	50
1920x1080/60p	67.43	60
	67.5	60

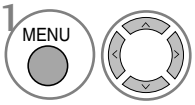
EXTERNAL EQUIPMENT SETUP

SCREEN SETUP FOR PC MODE

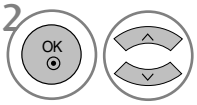
Screen Reset

Returns Position, Size and Phase to the default factory settings.

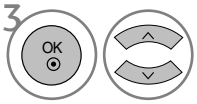
This function works in the following mode: RGB[PC].



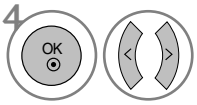
Select **PICTURE**.



Select **SCREEN**.



Select **Reset**.



Select **Yes**.

Run **Reset**.

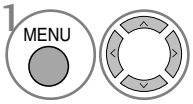
- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

EXTERNAL EQUIPMENT SETUP

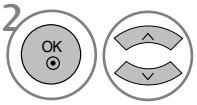
Adjustment for screen Position, Size, Phase

If the picture is not clear after auto adjustment and especially if characters are still shaky, adjust the picture phase manually.

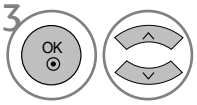
This function works in the following mode: RGB[PC].



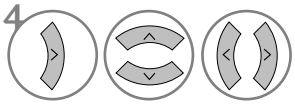
Select **PICTURE**.



Select **SCREEN**.



Select **Position**, **Size** or **Phase**.



Make appropriate adjustments.

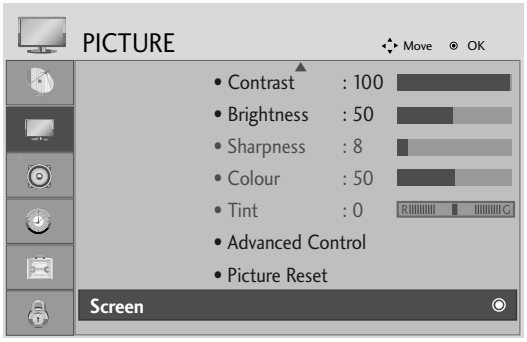
- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

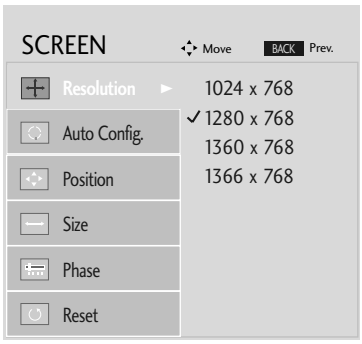
EXTERNAL EQUIPMENT SETUP

Selecting Resolution

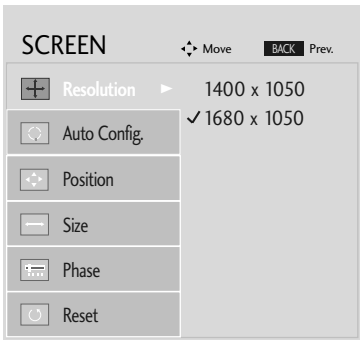
To view a normal picture, match the resolution of RGB mode and selection of PC mode.

This function works in the following mode: RGB[PC] mode.

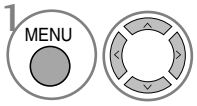




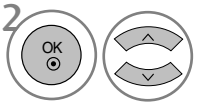
<M197WD>



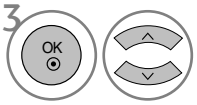
<M227WD/M237WD>



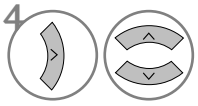
Select **PICTURE**.



Select **SCREEN**.



Select **Resolution**.



Select the desired resolution.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

EXTERNAL EQUIPMENT SETUP

Auto Configure (RGB [PC] mode only)

Automatically adjusts picture position and minimizes image instability. After adjustment, if the image is still not correct, your set is functioning properly but needs further adjustment.

Auto configure
This function is for automatic adjustment of the screen position, clock, and phase The displayed image will be unstable for a few seconds while the auto configuration is in progress.

1. Using OSD

1 MENU — Select **PICTURE.**

2 OK — Select **SCREEN.**

3 OK — Select **Auto Config.**

4 OK — Select **Yes.**

5 OK — Run **Auto Config.**

- If the position of the image is still not correct, try Auto adjustment again.
- If picture needs to be adjusted again after Auto adjustment in RGB (PC), you can adjust the **Position**, **Size** or **Phase**.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

EXTERNAL EQUIPMENT SETUP

2. Using OK(Remocon or control key)

This function is available for RGB signals only.

1

Press **OK.**

Auto Config. ▶ ◉ OK

- If you don't want Auto Configure, do not press ◉ OK

<M197WD>

2

Press **OK.**

Auto in progress

<1360 x 768 Resolution>

Auto in progress
For optimal display
change resolution 1360 x 768

<Others Resolution>

<M227WD/M237WD>

2

Press **OK.**

Auto in progress

<1920 x 1080 Resolution>

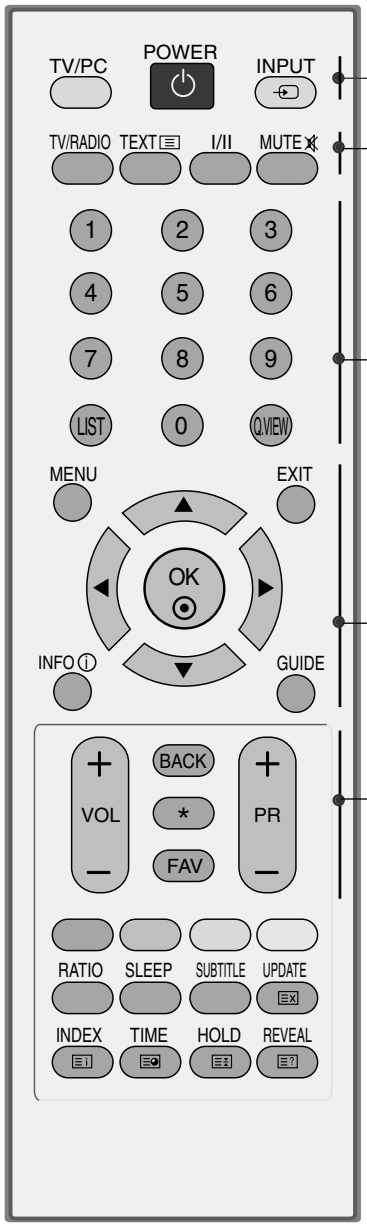
Auto in progress
For optimal display
change resolution 1920 x 1080

<Others Resolution>

WATCHING TV /PROGRAMME CONTROL

REMOTE CONTROL KEY FUNCTIONS

When using the remote control, aim it at the remote control sensor on the set.



POWER Switches the set on off.

TV/PC Selects TV or PC mode.
Switches the set on.

INPUT External input mode rotates in regular sequence.
Switches the set on.

TV/RADIO Selects Radio or TV channel.

I/II Selects the sound output.(Refer to the p.65,66)

MUTE Switches the sound on or off.

0~9 number button Selects a programme.
Selects numbered items in a menu.

LIST Displays the programme table.(Refer to the p.44)

Q.VIEW Returns to the previously viewed programme.

MENU Selects a menu.(Refer to the p.32)

EXIT Clears all on-screen displays.

INFO ⓘ Shows the present screen information.

GUIDE Shows programme schedule.(Refer to the p.45~47)

THUMBSTICK (Up/Down/Left/Right) Allows you to navigate the on-screen menus and adjust the system settings to your preference.

OK Accepts your selection or displays the current mode.

VOLUME UP /DOWN Adjusts the volume.

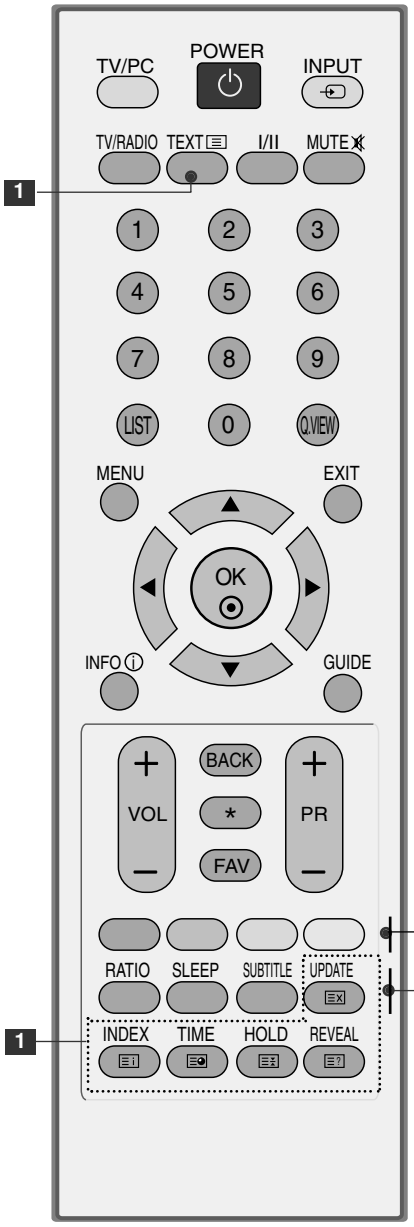
BACK Allows the user to move back one step in an interactive application, EPG or other user interaction function.

***** No function

FAV Displays the selected favourite programme. (Refer to the p38)

Programme UP/DOWN Selects a programme.

WATCHING TV /PROGRAMME CONTROL



1 **TELETEXT BUTTONS** These buttons are used for teletext. For further details, see the 'Teletext' section. (Refer to the p.81~83)

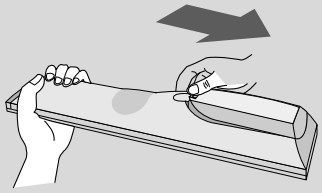
Colour buttons These buttons are used for teletext (only **TELETEXT** models) or **Programme edit**. (Refer to the p.38,39,45~47,83)

RATIO Selects your desired picture format. (Refer to the p.48,49)

SLEEP Sets the sleep timer. (Refer to the p.72)

SUBTITLE Recalls your preferred subtitle in digital mode.

Installing Batteries



- Open the battery compartment cover on the back and install the batteries matching correct polarity (+ with +, - with -).
- Install two 1.5V AAA batteries. Don't mix old or used batteries with new ones.
- Close cover.

WATCHING TV /PROGRAMME CONTROL

TURNING ON THE TV

- **If your TV is turned on, you will be able to use its features.**

1. First, connect power cord correctly.
2. Turn on power by pressing the power button on the product.
3. Press the TV/PC button on the remote control.
4. Set the channel by using the PR+ / - buttons or number buttons on the remote control.

Initializing setup

If the OSD (On Screen Display) is displayed on the screen as figure after turning on the set, you can adjust the Language, Country, Time Zone, Auto programme tuning.

Note:

a. It will automatically disappear after approx. 40 seconds unless a button is pressed.

*b. Press the **BACK** button to change current OSD into previous OSD.*

WATCHING TV /PROGRAMME CONTROL

PROGRAMME SELECTION

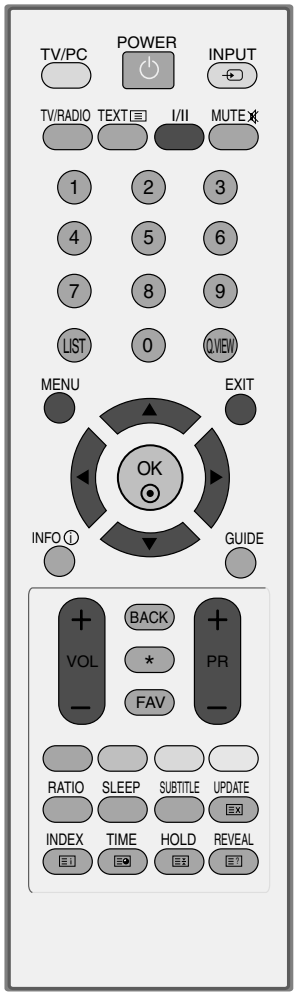
1 Press the **PR +** or **-** or **NUMBER** buttons to select a programme number.

VOLUME ADJUSTMENT

1 Press the **VOL +** or **-** button to adjust the volume.

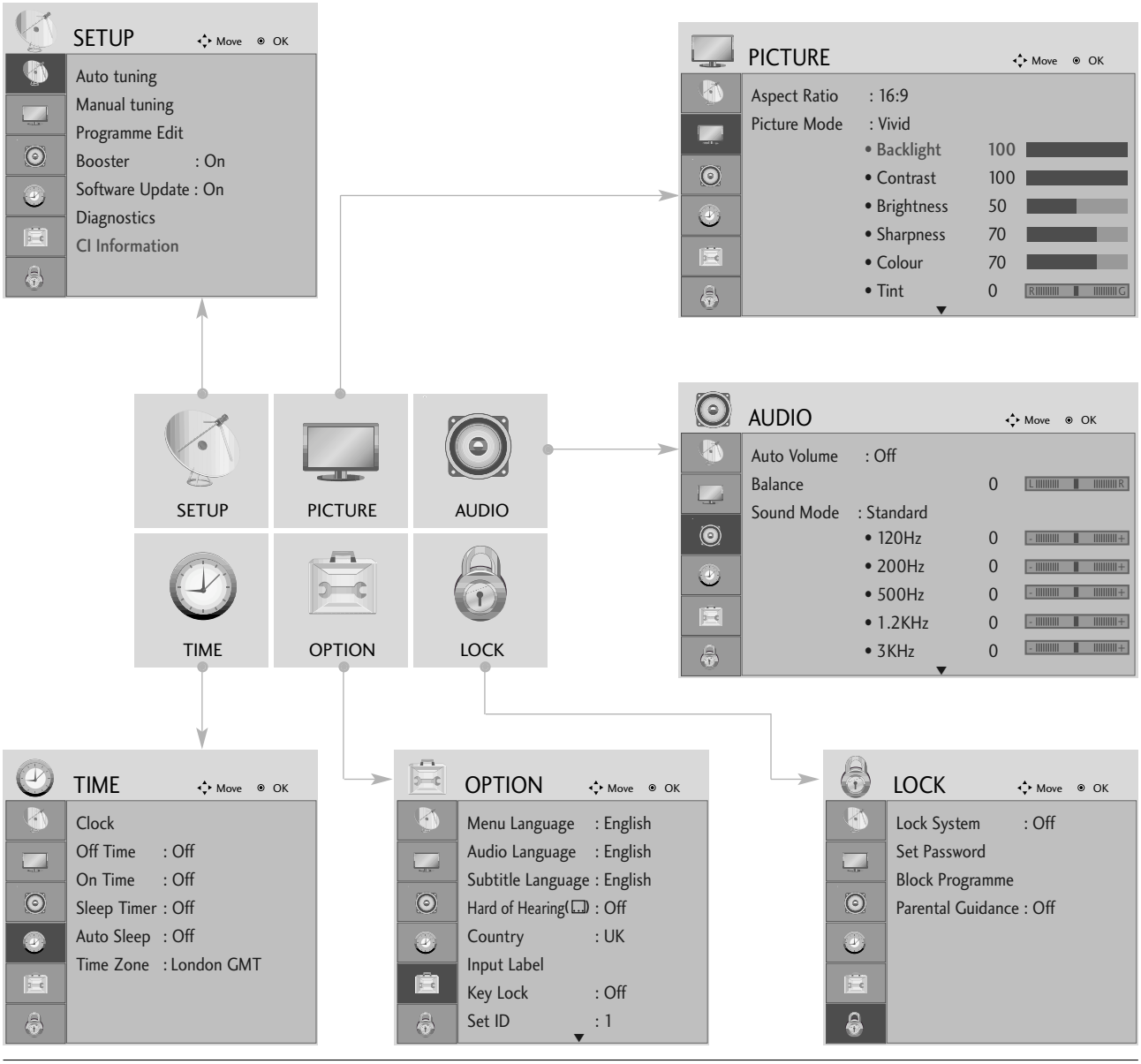
If you want to switch the sound off, press the **MUTE** button.

You can cancel this function by pressing the **MUTE**, **VOL +** or **-**, or **I/II** button.



WATCHING TV /PROGRAMME CONTROL
ON SCREEN MENUS SELECTION AND ADJUSTMENT

Your set's OSD (On Screen Display) may differ slightly from what is shown in this manual.



1 MENU

Display each menu.

2 OK

Select a menu item.

3 OK

Move to the pop up menu.

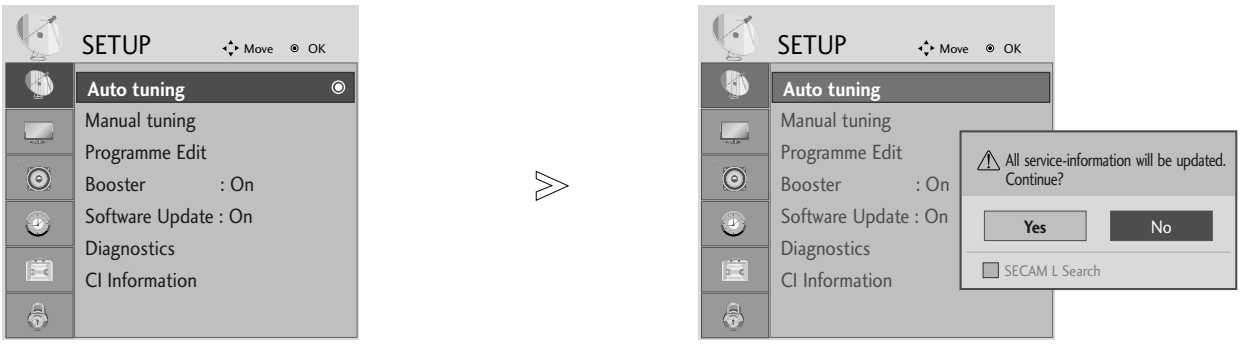
- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

WATCHING TV /PROGRAMME CONTROL

AUTO PROGRAMME TUNING

Use this to automatically find and store all available programmes.

When you start auto programming in digital mode, all previously stored service information will be deleted.



1 MENU — Select **SETUP**.

2 OK — Select **Auto Tuning**.

3 OK — Select **Yes**.

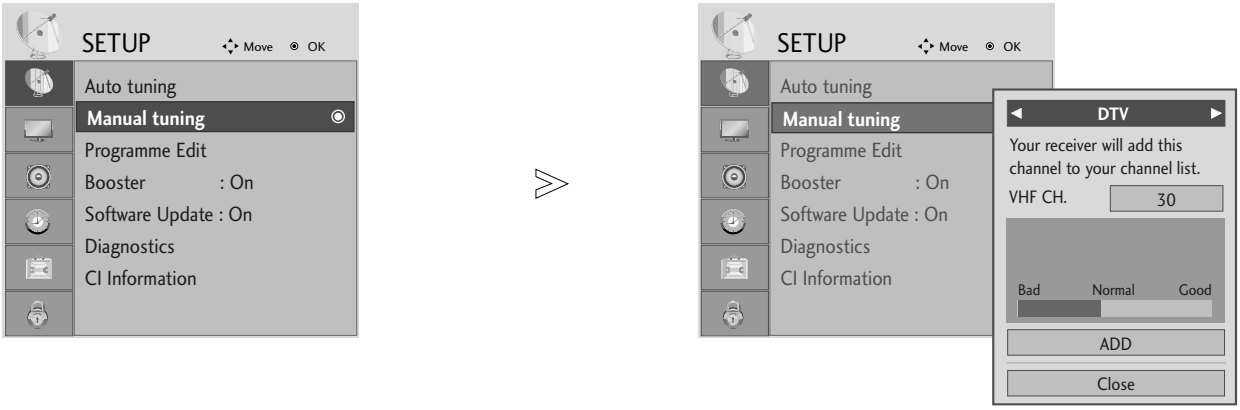
4 OK — Run **Auto tuning**.

- Use NUMBER buttons to input a 4-digit password in **Lock System** '**On**'.
- If you wish to keep on auto tuning, select **YES** using the ◄ ► button. Then, press the **OK** button. Otherwise, select **NO**.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

MANUAL PROGRAMME TUNING (IN DIGITAL MODE)

Manual Tuning lets you manually add a programme to your programme list.



1 Select **SETUP**.

2 Select **Manual Tuning**.

3 Select **DTV**.

4 Select the desired channel number.

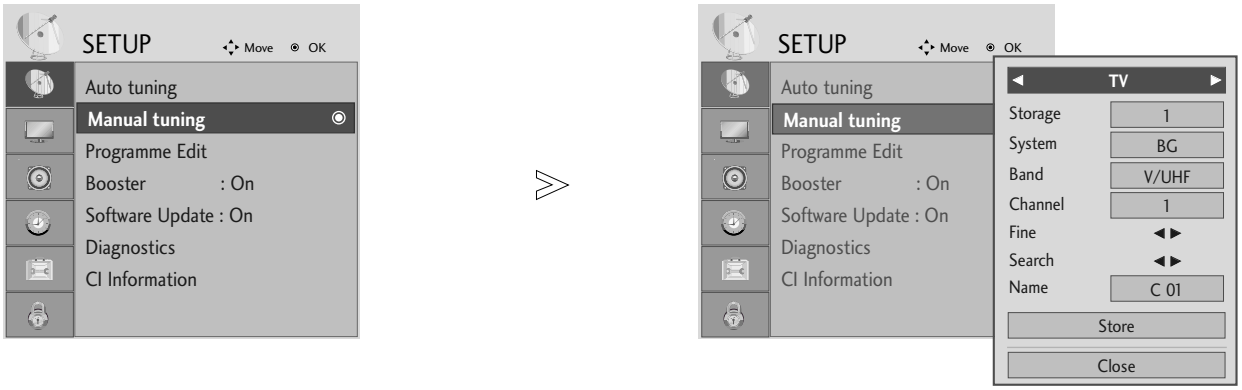
- Use NUMBER buttons to input a 4-digit password in **Lock System** '**On**'.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

WATCHING TV /PROGRAMME CONTROL

MANUAL PROGRAMME TUNING (IN ANALOGUE MODE)

Manual Tuning lets you manually tune and arrange the stations in whatever order you desire.



1 MENU — Select **SETUP**.

2 OK — Select **Manual Tuning**.

3 OK — Select **TV**.

4 — or — Select the desired programme number on.

5 — Select a TV system.

6 — Select **V/UHF** or **Cable**.

7 — or — Select the desired channel number.

8 — Start searching.

9 OK — Select **Store**.

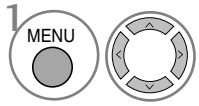
- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

- Use NUMBER buttons to input a 4-digit password in **Lock System** '**On**'.
- **L**: SECAM L/L' (France)
  BG: PAL B/G, SECAM B/G (Europe / East Europe / Asia / New Zealand / M. East / Africa / Australia)
  I: PAL I/II (U.K. / Ireland / Hong Kong / South Africa)
  DK: PAL D/K, SECAM D/K (East Europe / China / Africa / CIS)
- To store another channel, repeat steps 4 to 9.

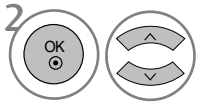
WATCHING TV /PROGRAMME CONTROL

■ Assigning a station name

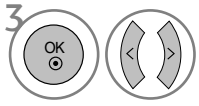
You can assign a station name with five characters to each programme number.



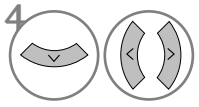
Select **SETUP**.



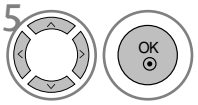
Select **Manual Tuning**.



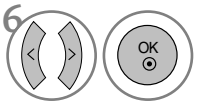
Select **TV**.



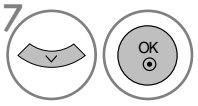
Select **Name**.



Select the position and make your choice of the second character, and so on.
You can use the alphabet **A** to **Z**, the number **0** to **9**, +/ -, and space.



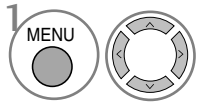
Select **Close**.



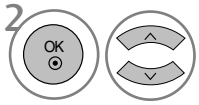
Select **Store**.

■ Fine Tuning

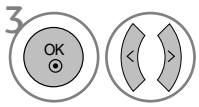
Normally fine tuning is only necessary if reception is poor.



Select **SETUP**.

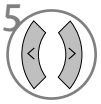


Select **Manual Tuning**.

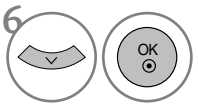


Select **TV**.

Select **Fine**.



Fine tune for the best picture and sound.



Select **Store**.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

WATCHING TV /PROGRAMME CONTROL

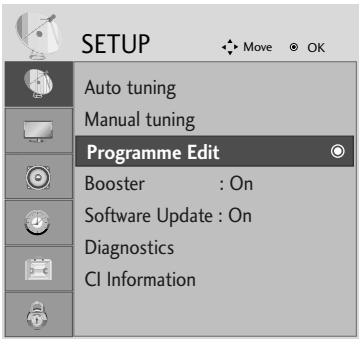
PROGRAMME EDIT

When a programme number is skipped, it means that you will be unable to select it using **PR** + / - button during TV viewing.

If you wish to select the skipped programme, directly enter the programme number with the NUMBER buttons or select it in the Programme edit menu

This function enables you to skip the stored programmes.

In some countries, it is possible to move a programme number by using the YELLOW button only.



1 MENU Select **SETUP**.

2 OK Select **Programme Edit**.

3 OK Enter the **Programme Edit**.

4 Select a programme to be stored or skipped.

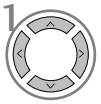
- Use NUMBER buttons to input a 4-digit password in **Lock System** '**On**'.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

WATCHING TV /PROGRAMME CONTROL

IN DTV/RADIO MODE

■ Skipping a programme number

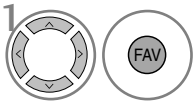
1  Select a programme number to be skipped.

2 **BLUE** Turn the skipped programme number to blue.

3 **BLUE** Release the skipped programme.

- When a programme number is skipped, it means that you will be unable to select it using the **PR** + / - button during normal TV viewing.
- If you wish to select a skipped programme, directly enter the programme number with the NUMBER buttons or select it in the programme edit or EPG.

■ Selecting favourite programme

1 

Select your favourite programme number.

- It will automatically include the selected programme into your favourite programme list.

WATCHING TV /PROGRAMME CONTROL

IN TV MODE

This function enables you to delete or skip the stored programmes.
You can also move some channels to other programme numbers.

■ Auto Sort

1 GREEN Start Auto Sort.

- After activating Auto Sort once, you can no longer edit programmes.

■ Deleting a programme

1 Select a programme number to be deleted.

2 RED Turn the deleted programme number to red.

3 RED Release the deleted programme.

- The selected programme is deleted, all the following programmes are shifted up one

■ Moving a programme

1 Select a programme number to be moved.

2 YELLOW Turn the moved programme number to YELLOW.

3 YELLOW Release the moved programme.

■ Skipping a programme number

1 Select a programme number to be skipped.

2 BLUE Turn the skipped programme number to blue.

3 BLUE Release the skipped programme.

- When a programme number is skipped it means that you will be unable to select it using the PR + / - button during normal TV viewing.
- If you wish to select a skipped programme, directly enter the programme number with the NUMBER buttons or select it in the programme edit or EPG.

■ Selecting a Favourite Programme

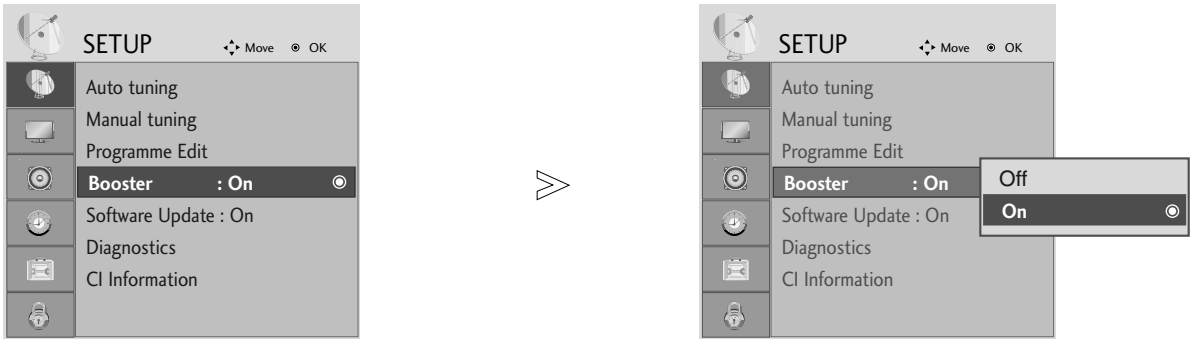
1 FAV Select your favourite programme number.

- The selected programme will be added to the favourite programme list.

BOOSTER (IN DIGITAL MODE ONLY)

If reception is poor, change **Booster** to **On**.

When the signal is strong, select "**Off**".



1 MENU — Select **SETUP**.

2 OK — Select **Booster**.

3 OK — Select **On** or **Off**.

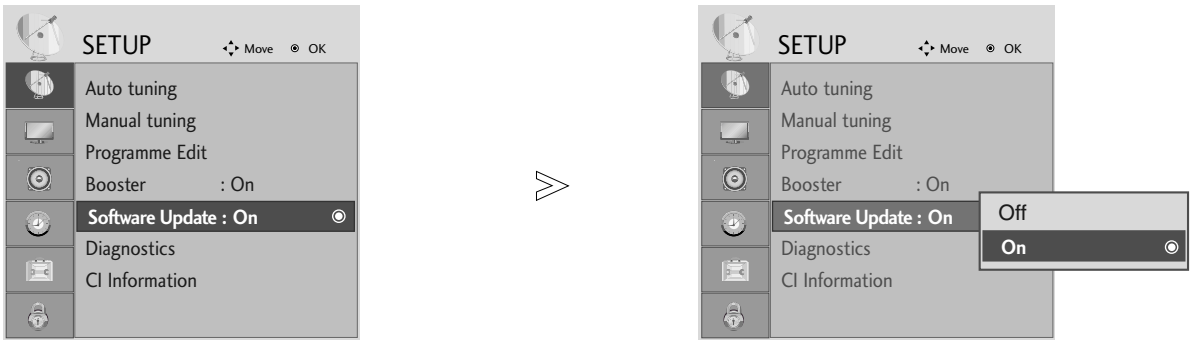
4 OK — Save.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

WATCHING TV /PROGRAMME CONTROL

SOFTWARE UPDATE

Software Update means software can be downloaded through the digital terrestrial broadcasting system.



1 MENU — Select **SETUP**.

2 OK — Select **Software Update**.

3 OK — Select **On** or **Off**.
- If you select **On**, a user confirm message box will be displayed to notify that new software is found.

4 OK — Save.

*** When setting "Software Update"**

Occasionally, a transmission of updated digital software information will result in the following menu on the TV screen.

Select the **YES** using the ◄ ► button and when you see the following picture.

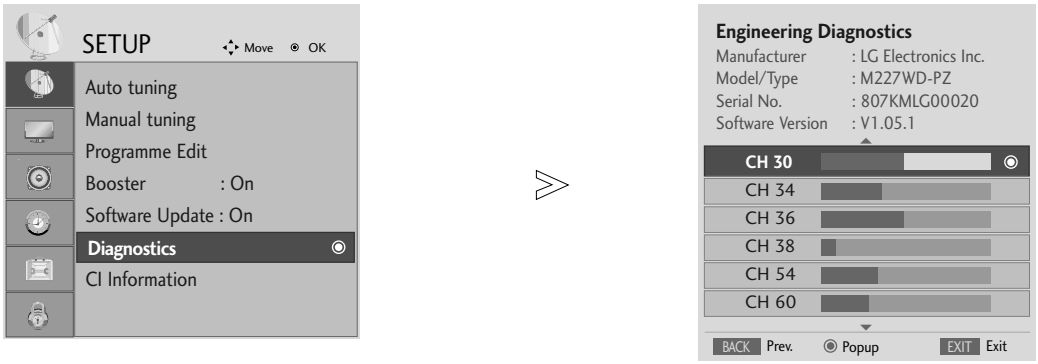
After Software Update is completed, the System takes about one minute to restart.

- During Progress of a Software Update, please note the following:
- Power to the set must not be interrupted.
- The set must not be switched off.
- The antenna must not be disconnected.
- After Software Update, you can confirm the updated software version in Diagnostics menu.

DIAGNOSTICS (IN DIGITAL MODE ONLY)

This function enables you to view information on the Manufacturer, Model/Type, Serial Number and Software Version.

This displays the information and signal strength of the tuned MUX.
This displays the signal information and service name of the selected MUX.



1 MENU

Select **SETUP**.

2 OK

Select **Diagnostics**.

3 OK

Display Manufacturer, Model/Type, Serial Number and Software Version.

4 OK

Display the Channel information.

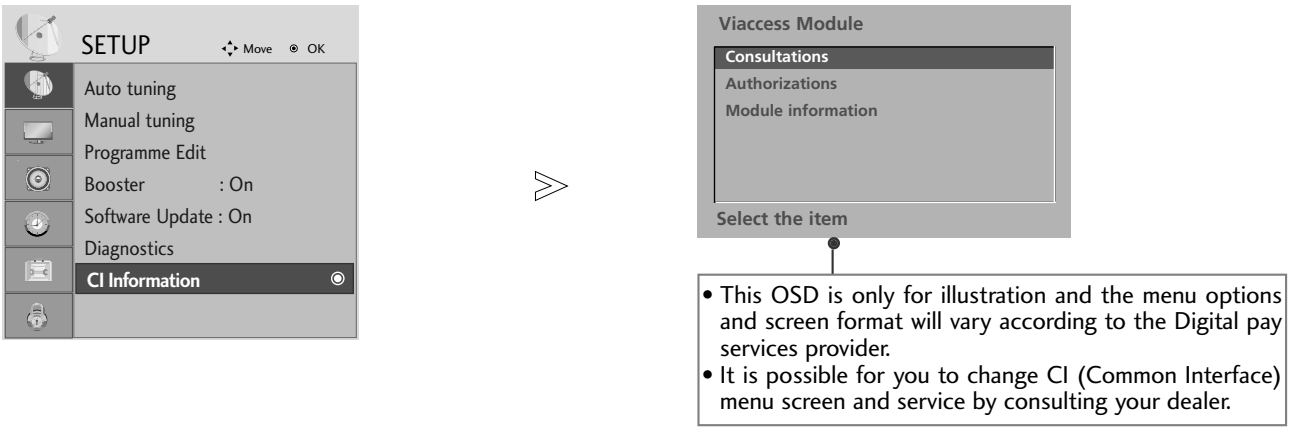
- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

CI [COMMON INTERFACE] INFORMATION

This function enables you to watch some encrypted services (paid services). If you remove the CI Module, you cannot watch paid services.
When the module is inserted into the CI slot, you can access the module menu.
To purchase a module and smart card, contact your dealer. Do not repeatedly insert or remove a CAM module from the set. This may cause a malfunction. When the set is turned on after inserting a CI Module, you may not have any sound output.

This may be incompatible with the CI module and smart card.

CI (Common Interface) functions may not be possible depending upon the country broadcasting circumstances.



- This OSD is only for illustration and the menu options and screen format will vary according to the Digital pay services provider.
- It is possible for you to change CI (Common Interface) menu screen and service by consulting your dealer.

1 MENU

Select **SETUP**.

2 OK

Select **CI Information**.

3 OK

Select the desired item: Module information, smart card information, language, or software download, etc.

4 OK

Save.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

WATCHING TV /PROGRAMME CONTROL

SELECTING THE PROGRAMME TABLE

You can check which programmes are stored in the memory by displaying the programme table.

Displayed in the Locked Programme.

■ Displaying programme LIST

1

Display the **PROGRAMME LIST.**

- You may find some blue programmes. These have been set up to be skipped by auto programming or in the programme edit mode.
- Some programmes with the channel number shown in the programme LIST indicate there is no station name assigned.

■ Selecting a programme in the programme list

1

Select a programme.

2

Switch to the chosen programme number.

From the programme you are currently watching, the mode will change from TV to DTV to Radio.

■ Paging through a programme list

1

Turns the pages.

2

Returns to normal TV viewing.

■ Displaying the favourite programme table

1

Display the Favourite Programme table.

EPG (ELECTRONIC PROGRAMME GUIDE) (IN DIGITAL MODE)

This system has an Electronic Programme Guide (EPG) to help navigate through all the possible viewing options.

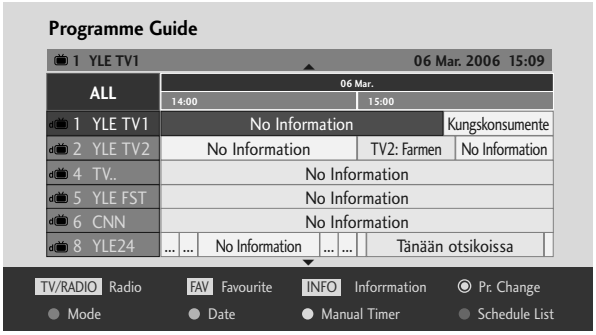
The EPG supplies information such as programme listings, start and end times for all available services. In addition, detailed information about the programme is often available in the EPG (the availability and amount of these programme details will vary, depending on the particular broadcaster).

This function can be used only when the EPG information is broadcasted by broadcasting companies.

The EPG displays the programme description for the next eight days.

Switch on/off EPG

Switch on or off EPG.



Select a programme

or

Select desired programme.

Display the selected programme.

EPG (ELECTRONIC PROGRAMME GUIDE) (IN DIGITAL MODE)

Button Function in NOW/NEXT Guide Mode

Change EPG mode.

Enter Timer Record/Remind setting mode.

Enter Timer Record/Remind list mode.

Change to the selected programme.

Select NOW or NEXT Programme.

Select the Broadcast Programme.

Page Up/Down.

or

Switch off EPG.

Select TV or RADIO Programme.

The detail information on or off.

Button Function in 8 Day Guide Mode

Change EPG mode.

Enter Date setting mode.

Enter Timer Record/Remind setting mode.

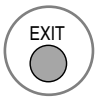
Enter Timer Record/Remind list mode.

Change to the selected programme.

Select NOW or NEXT Programme.

Select the Broadcast Programme.

Page Up/Down.

or


Switch off EPG.

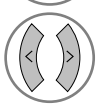
Select TV or RADIO Programme.

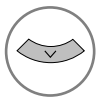
The detailed information on or off.

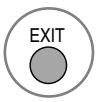
Button Function in Date Change Mode

Switch off Date setting mode.

Change to the selected date.


Select a date.


Switch off Date setting mode.

or


Switch off EPG.

EPG (ELECTRONIC PROGRAMME GUIDE) (IN DIGITAL MODE)

Button Function in Extended Description Box

Text Up/Down.

Enter Timer Record/Remind setting mode.

The detailed information on or off.

or

Switch off EPG.

Button Function in Record/Remind Setting Mode

- This function is available only when recording equipment that uses 8 pin recording signalling has been connected to the DTV-OUT terminal, using a SCART cable.

Change to Guide or Timer list mode.

Save Timer Record/Remind.

Select Type, Service, Date or Start/End time.

Function setting.

Button Function in Schedule List Mode

Add new Manual Timer setting mode.

Enter Schedule list editing mode.

Delete the selected item.

Change to Guide mode.

Select Schedule list.

PICTURE CONTROL

PICTURE SIZE (ASPECT RATIO) CONTROL

You can watch the screen in various picture formats; 16:9, Just Scan, Original, 4:3, 14:9 and Zoom1/2.

If a fixed image is displayed on the screen for a long time, that fixed image may become imprinted on the screen and remain visible.

You can adjust the enlarge proportion using ▲ ▼ button.

This function works in the following signal.

- You can also adjust **Aspect Ratio** in the **RATIO** OSD.
- For Zoom Setting, select **14:9**, **Zoom1** and **Zoom2** in Ratio OSD.

• **16:9**

The following selection will allow you to adjust the picture horizontally, in linear proportion, to fill the entire screen (useful for viewing 4:3 formatted DVDs).

• **4:3**

The following selection will allow you to view a picture with an original 4:3 aspect ratio, grey bars will appear on both the left and right of the screen.

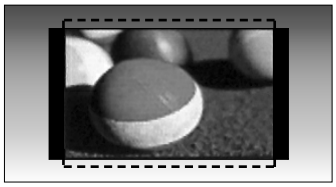
PICTURE CONTROL

• **Original**

When your TV receives a wide screen signal, it will automatically change to the picture format broadcast.

• **14:9**

You can view a picture format of 14:9 or a general TV programme in the 14:9 mode. The 14:9 screen is viewed in the same way as in 4:3, but is magnified to the left and right.

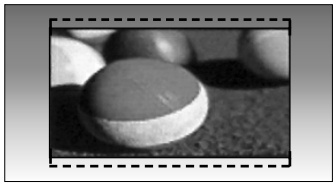


• **Zoom1**

The following selection will allow you to view the picture without any alteration, while filling the entire screen. However, the top and bottom of the picture will be cropped.

• **Zoom2**

Choose Zoom 2 when you wish the picture to be altered, both horizontally extended and vertically cropped. The picture adopting a compromise between alteration and screen coverage.



• **Just Scan**

The following Selection allows you to view the picture in the best quality without loss of original picture in high resolution image.

Note: If there is interference in original picture, you can view interference at the edge.

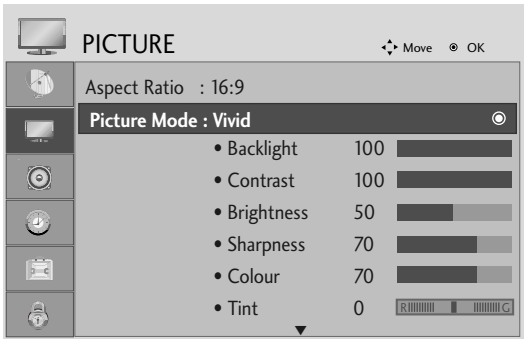
NOTE

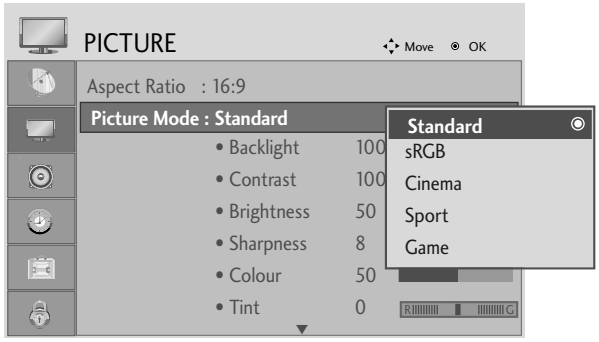
- ▶ You can only select **16:9 (Wide)**, **4:3**, **14:9**, **Zoom 1/2** in **Component** (under 720p) mode.
- ▶ You can only select **4:3**, **16:9** (Wide) in **RGB/DVI** mode only.
- ▶ In **HDMI/Component** (over 720p) mode, **Just Scan** is available.
- ▶ You can only select **Original** in UK digital teletext (MHEG-5).

PICTURE CONTROL

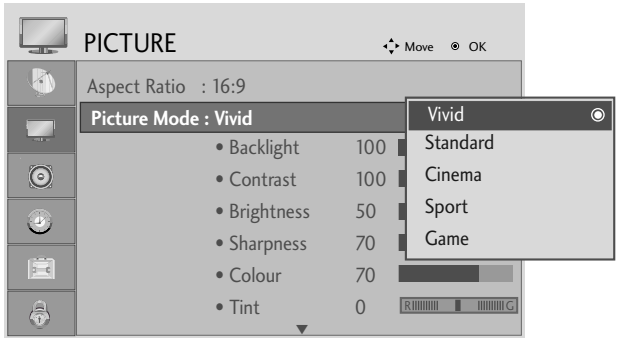
PRESET PICTURE SETTINGS

Picture Mode-Preset





<RGB,DVI Mode>



<Other mode>

1 MENU

Select **PICTURE**.

2 OK

Select **Picture Mode**.

3 OK

Select desired picture value.

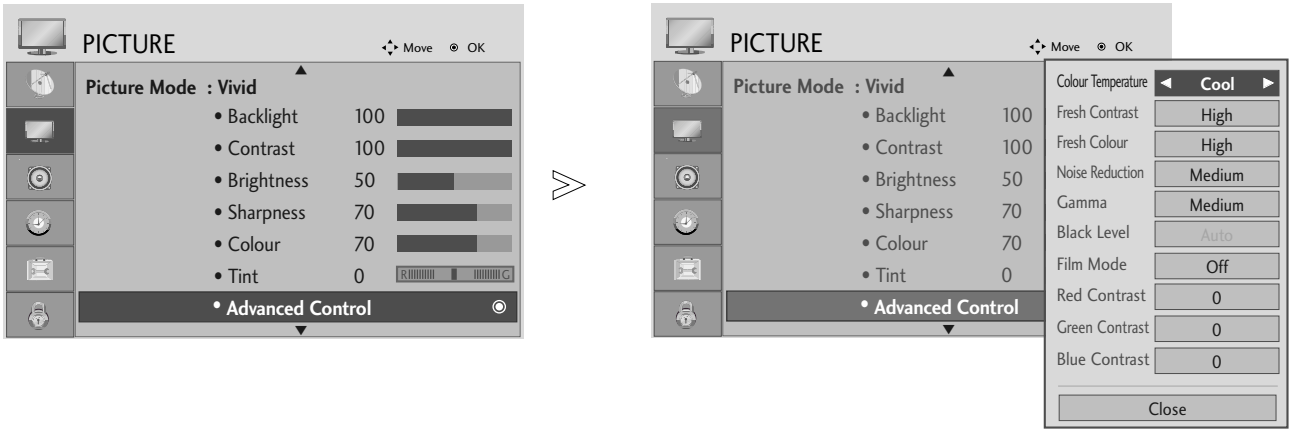
- **Picture Mode** adjusts the set for the best picture appearance. Select the preset value in the **Picture Mode** menu based on the programme category.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

PICTURE CONTROL

Auto Colour Tone Control (Warm/Medium/Cool)

Choose one of three automatic colour adjustments. Set to warm to enhance warm colours such as red, or set to cool to see less intense colours with more blue.



1 MENU Select **PICTURE**.

2 OK Select **Advanced Control**.

3 OK Select **Colour Temperature**.

4 Select either **Cool**, **Medium** or **Warm**.

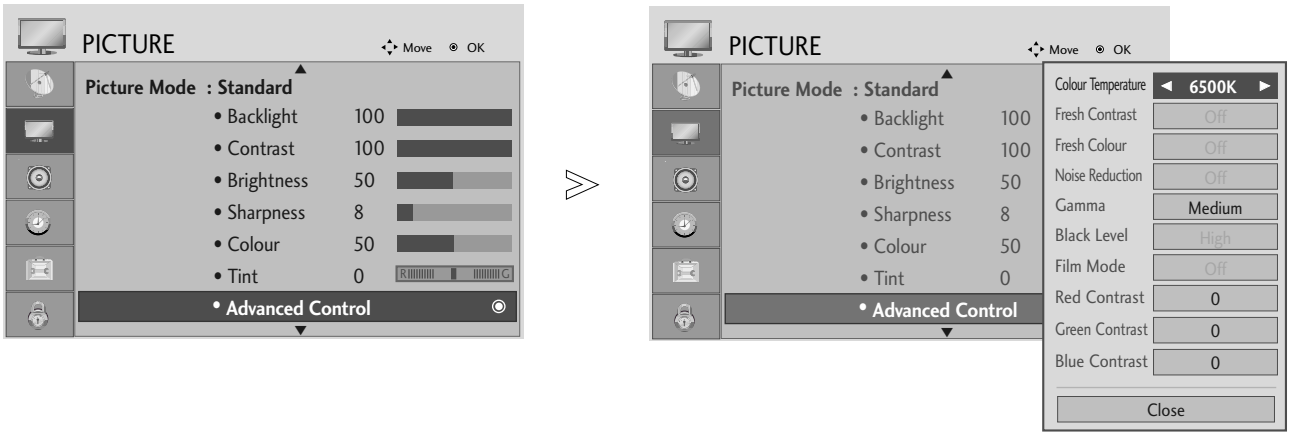
- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

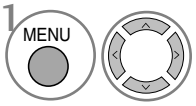
PICTURE CONTROL

Auto Colour Tone Control (6500K/9300K)(RGB,DVI mode only)

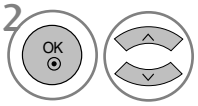
Advanced control menu is inactivated when picture mode is sRGB.

Choose one of two automatic colour adjustments.

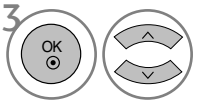




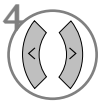
Select **PICTURE**.



Select **Advanced Control**.



Select **Colour Temperature**.

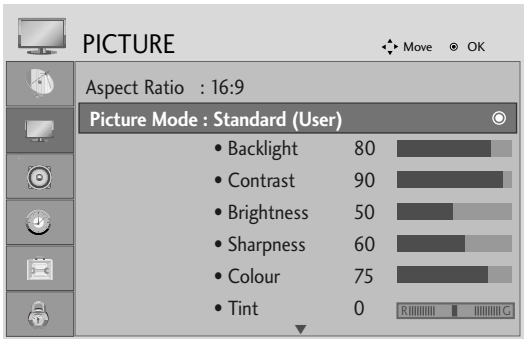


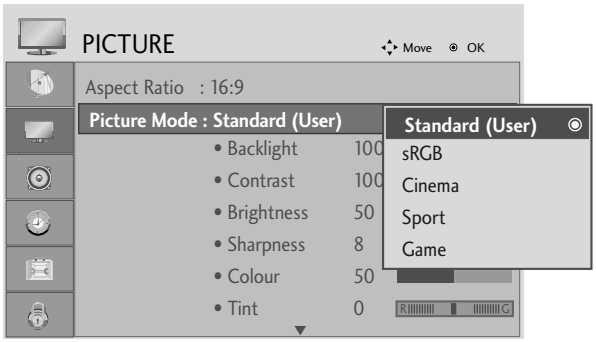
Select either **6500K, 9300K**.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

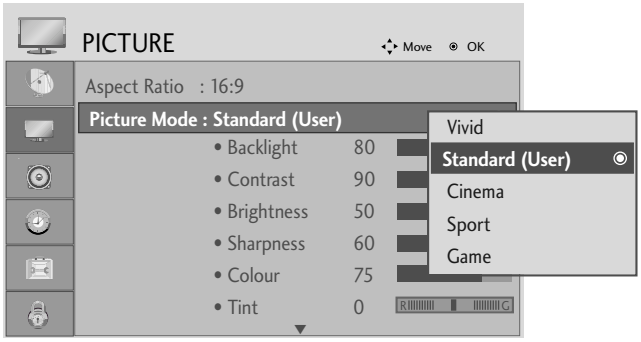
MANUAL PICTURE ADJUSTMENT

Picture Mode-User option

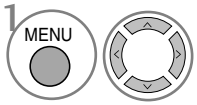




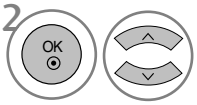
<RGB,DVI Mode>



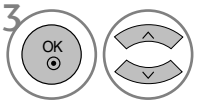
<Other mode>



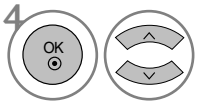
Select **PICTURE**.



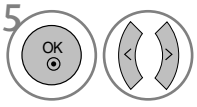
Select **Picture Mode**.



Select desired picture value.



Select **Backlight**, **Contrast**, **Brightness**, **Sharpness**, **Colour** or **Tint**.



Make appropriate adjustments.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

NOTE

► You cannot adjust colour, sharpness and tint in the RGB, DVI mode.

PICTURE CONTROL

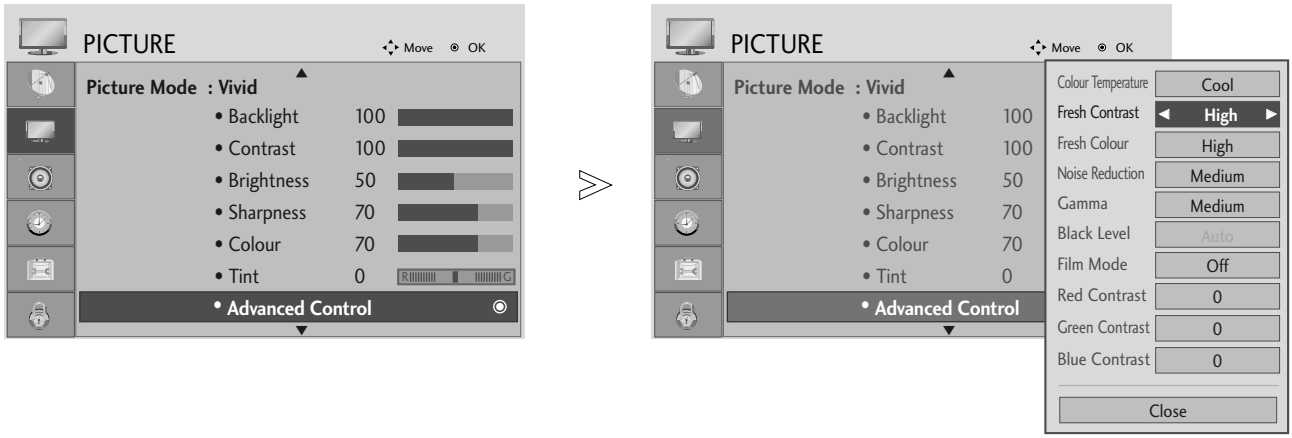
PICTURE IMPROVEMENT TECHNOLOGY

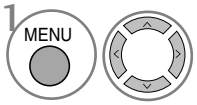
Fresh Contrast
Optimizes the contrast automatically according to the brightness of the reflection.

Fresh Colour
Adjusts the colour of the reflection automatically to reproduce natural colurs as close as possible.

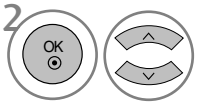
Noise Reduction
Removes interference up to the point where it does not damage the original picture.

Gamma
High gamma values display whitish images and low gamma values display high contrast images.

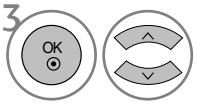




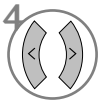
Select **PICTURE**.



Select **Advanced Control**.



Select **Fresh Contrast**, **Fresh Colour**, **Noise Reduction** or **Gamma**.



Select your desired Source.

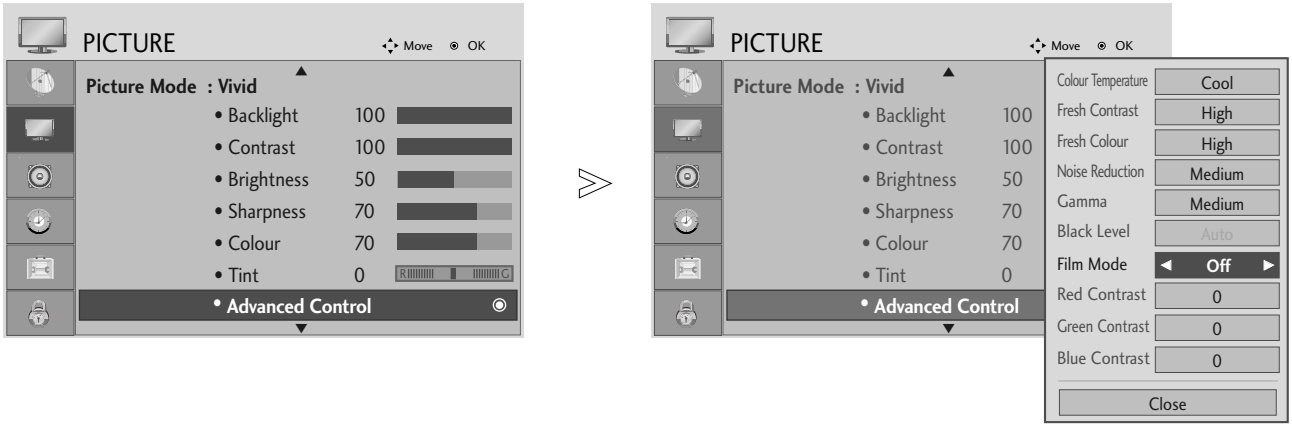
- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

PICTURE CONTROL

ADVANCED - FILM MODE

To set the product up for the best picture quality for viewing films.

This feature operates only in TV, AV and Component 480i/576i/1080i mode.



1 MENU

Select **PICTURE**.

2 OK

Select **Advanced Control**.

3 OK

Select **Film Mode**.

4

Select **On** or **Off**.

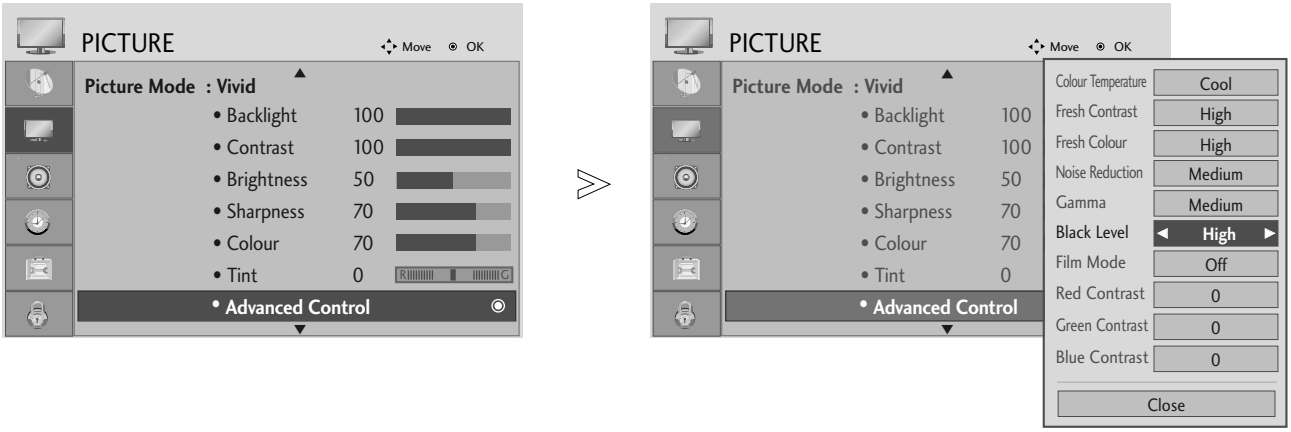
- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

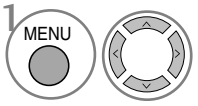
PICTURE CONTROL

ADVANCED - BLACK (DARKNESS) LEVEL

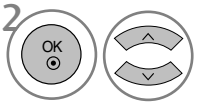
When you view a film, this function adjusts the set to the best picture quality.

This function works in the following mode: AV (NTSC-M), HDMI or Component.

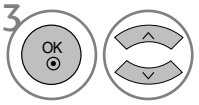




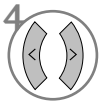
Select **PICTURE**.



Select **Advanced Control**.



Select **Black Level**.



Select **Low** or **High**.

- **Low:** The reflection of the screen gets darker.
- **High:** The reflection of the screen gets brighter.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

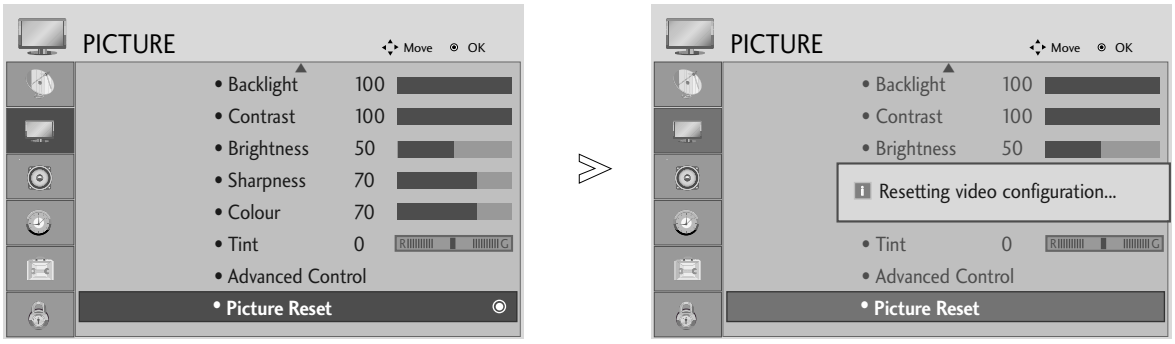
NOTE

- ► If input is not AV(NTSC-M), HDMI or component, this function set to auto.
- ► In case of auto, user can't adjust it directly.
- ► Auto: Realizing the black level of the screen and set it to High or Low automatically.

PICTURE CONTROL

PICTURE RESET

Settings of the selected picture modes return to the default factory settings.



1 MENU

Select **PICTURE**.

2 OK

Select **Picture Reset**.

3 OK

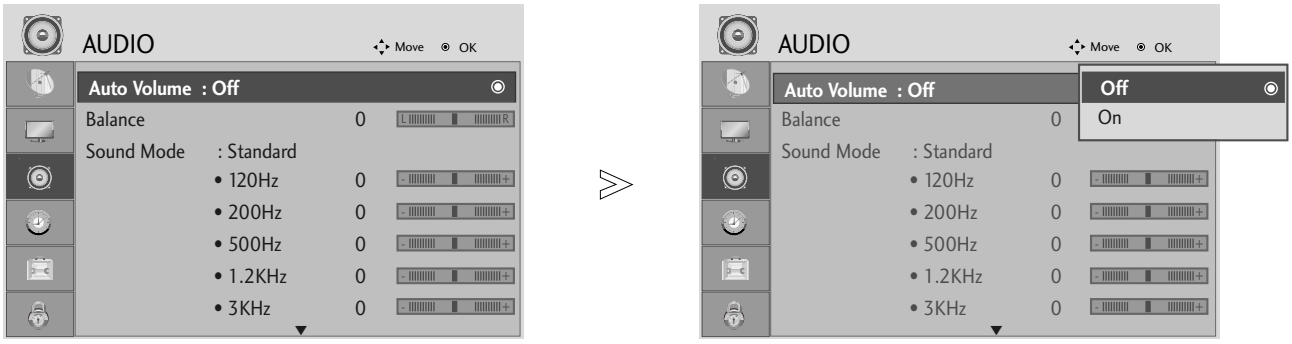
Initialize the adjusted value.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

SOUND & LANGUAGE CONTROL

AUTO VOLUME LEVELER

AVL automatically remains on the same volume level if you change programmes.



1 MENU

Select **AUDIO**.

2 OK

Select **Auto Volume**.

3 OK

Select **On** or **Off**.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

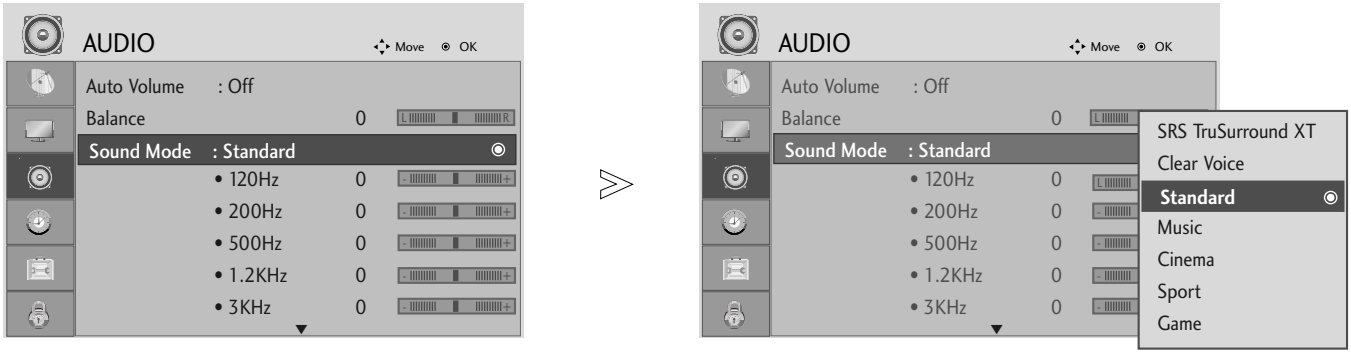
SOUND &LANGUAGE CONTROL

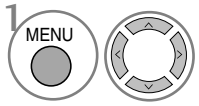
PRESET SOUND SETTINGS - SOUND MODE

You can select your preferred sound setting; **SRS TruSurround XT**, **Clear Voice, Standard**, **Music**, **Cinema**, **Sport** and **Game** and you can also adjust the frequency of the equalizer.

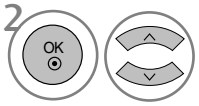
Sound Mode lets you enjoy the best sound without any Special adjustment as the TV set's the appropriate sound options based on the programme content.

SRS TruSurround XT, **Clear Voice, Standard**, **Music**, **Cinema**, **Sport** and **Game** are preset for optimum sound quality at the factory.

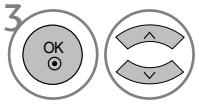




Select **AUDIO**.



Select **Sound Mode**.



Select **SRS TruSurround XT**, **Clear Voice, Standard**, **Music**, **Cinema**, **Sport** or **Game**.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

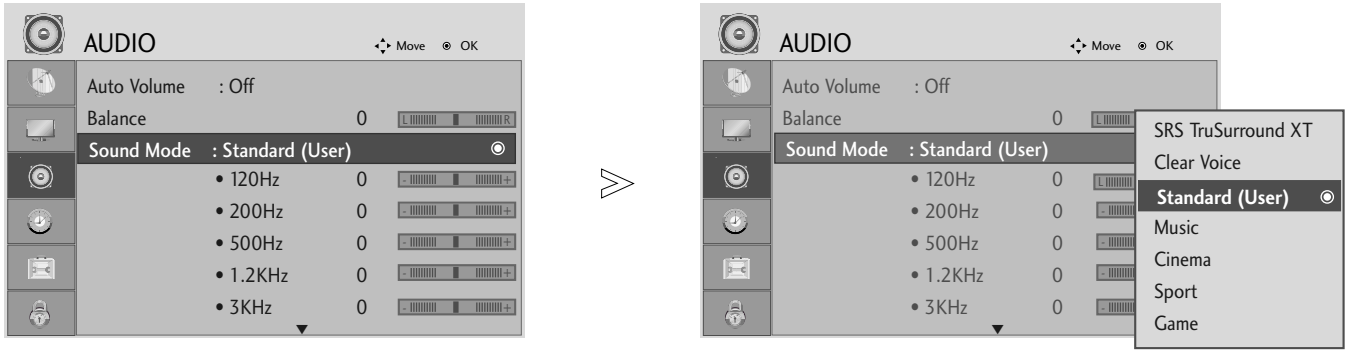
▶ SRS TruSurround XT are a trademark of SRS Labs, Inc.
▶ TruSurround XT technology is incorporated under license from SRS Labs, Inc.

SOUND &LANGUAGE CONTROL

SOUND SETTING ADJUSTMENT - USER MODE

Adjusting the audio equalizer.

Frequency bands are inactivated when Sound Mode is SRS TruSurround XT or Clear Voice.



1 MENU — Select **AUDIO**.

2 OK — Select **Sound Mode**.

3 OK — Select **SRS TruSurround XT**, **Clear Voice**, **Standard**, **Music**, **Cinema**, **Sport** or **Game**.

4 OK — Select a frequency band.

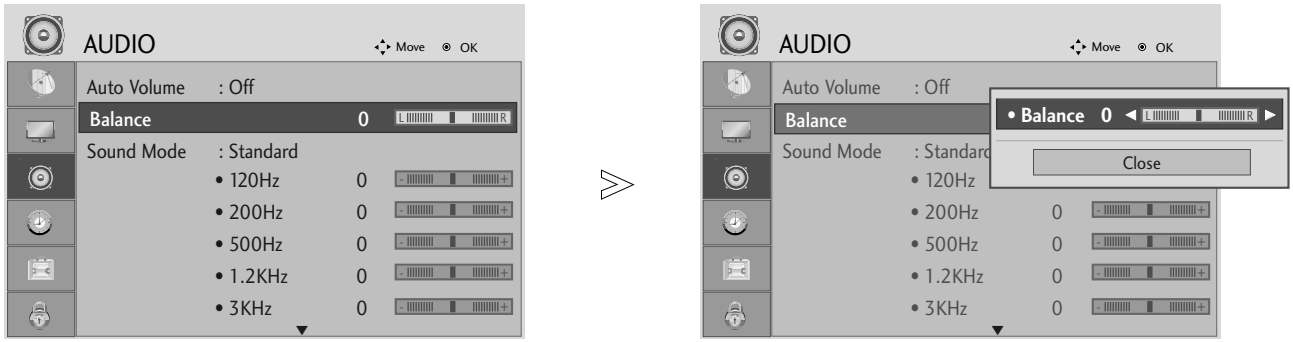
5 OK — Set the desired sound level.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

SOUND &LANGUAGE CONTROL

BALANCE

You can adjust the sound balance of the speakers to preferred levels.



1 MENU

Select **AUDIO**.

2 OK

Select **Balance**.

3 OK

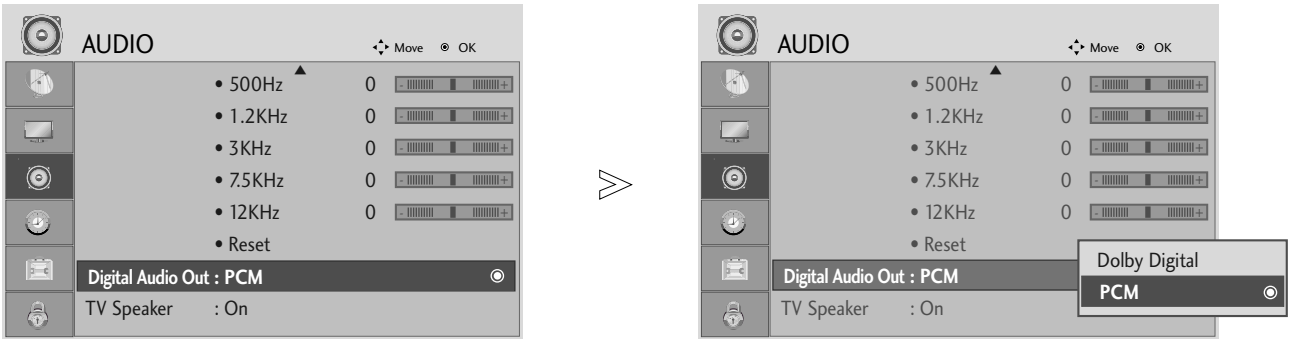
Make desired adjustment.

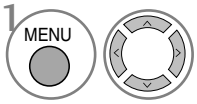
- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

SOUND &LANGUAGE CONTROL

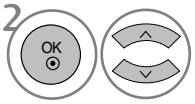
SELECTING DIGITAL AUDIO OUT

This function allows you to select your preferred Digital Audio Output.
The TV can only output DOLBY Digital if a channel is broadcast with Dolby Digital audio.
When Dolby digital is available, selecting Dolby Digital in the Digital Audio Out menu will set SPDIF output to Dolby Digital
If Dolby Digital is selected in the digital audio out menu when dolby digital is not available, SPDIF output will be PCM.
Even if both Dolby Digital and Audio language have been set in a channel which broadcast Dolby Digital Audio, only Dolby Digital will be played.

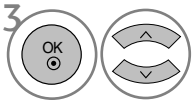




Select **AUDIO**.



Select **Digital Audio Out**.



Select **Dolby Digital** or **PCM**.

DOLBY DIGITAL

Manufactured under license from Dolby Laboratories. "*Dolby* "and the double-D symbol are trademarks of Dolby Laboratories.

- There is a possibility that when HDMI mode, some DVD players do not make SPDIF sound. At that time, set the output of the digital audio of the DVD player to PCM.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

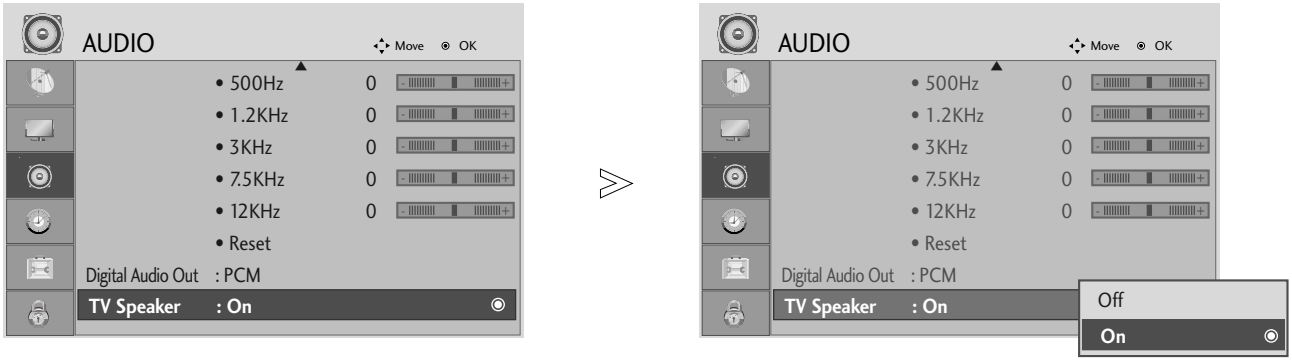
SOUND &LANGUAGE CONTROL

TV SPEAKERS ON/ OFF SETUP

You can adjust the internal speaker status.

In **COMPONENT, AV3** the TV speaker can be operational even when there is no video signal.

If you wish to use an external Hi-Fi system, turn off the TV internal speakers.



1 MENU

Select **AUDIO**.

2 OK

Select **TV Speaker**.

3 OK

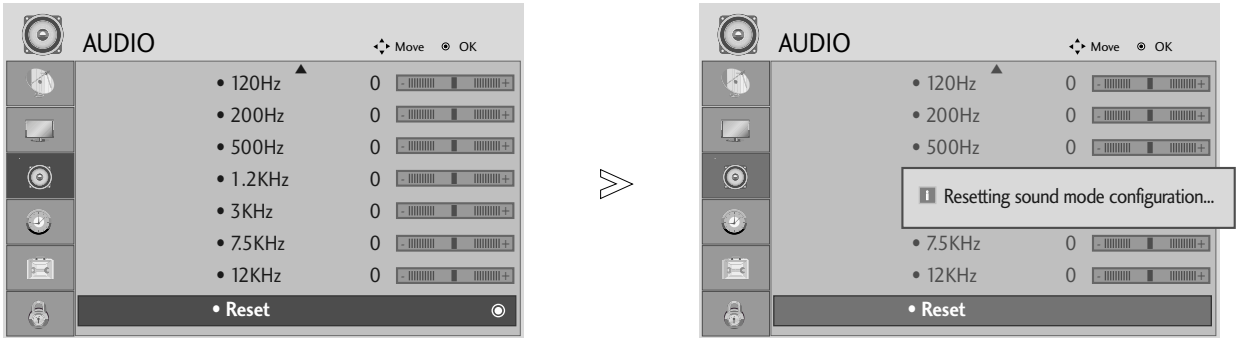
Select **On** or **Off**.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

SOUND &LANGUAGE CONTROL

AUDIO RESET

Settings of the selected Sound Mode return to the default factory settings.



1 MENU

Select **AUDIO**.

2 OK

Select **Reset**.

3 OK

Initialize the adjusted value.

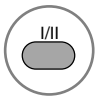
- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

SOUND &LANGUAGE CONTROL

I/II

Stereo/Dual Reception (In Analogue Mode Only)

When a programme is selected, the sound information for the station appears after the programme number and station name disappear.



Select the sound output.

Broadcast	On Screen Display
Mono	MONO
Stereo	STEREO
Dual	DUAL I, DUAL II, DUAL I+II

■ **Mono sound selection**

If the stereo signal is weak in stereo reception, you can switch to mono. In mono reception, the clarity of sound is improved.

■ **Language selection for dual language broadcast**

If a programme can be received in two languages (dual language), you can switch to DUAL I, DUAL II or DUAL I+II.

DUAL I	Sends the primary broadcast language to the loudspeakers.
DUAL II	Sends the secondary broadcast language to the loudspeakers.
DUAL I+II	Sends a separate language to each loudspeaker.

SOUND &LANGUAGE CONTROL

NICAM Reception (In Analogue Mode Only)

If the set is equipped with the receiver for NICAM reception, high quality NICAM (Near Instantaneous Companded Audio Multiplex) digital sound can be received.

Sound output can be selected according to the type of received broadcast as follows by pressing the I/II button repeatedly.

1. When **NICAM mono** is received, you can select **NICAM MONO** or **FM MONO**.

2. When **NICAM** stereo is received, you can select **NICAM STEREO** or **FM MONO**.
   If the stereo signal is weak, switch to **FM mono**.

3. When NICAM dual is received, you can select **NICAM DUAL I**, **NICAM DUAL II** or **NICAM DUAL I+II** or **MONO**.

Speaker Sound Output Selection

In AV, Component, RGB and HDMI, DVI mode, you can select output sound for the left and right loudspeakers.

Repeatedly press the I/II button to select the sound output.

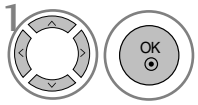
L+R: Audio signal from audio L input is sent to the left loud speaker and audio signal from audio R input is sent to the right loud speaker.

L+L: Audio signal from audio L input is sent to left and right loud speakers.

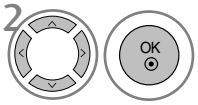
R+R: Audio signal from audio R input is sent to left and right loud speakers.

ON-SCREEN MENU LANGUAGE / COUNTRY SELECTION

The installation guide menu appears on the TV screen when it is switched on for the first time.

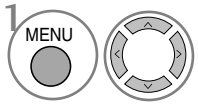


Select your desired language.

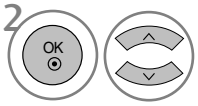


Select your country.

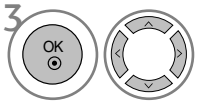
*** If you want to change Language/ Country selection**



Select **OPTION**.



Select **Menu Language** or **Country**.



Select your desired language or country.

Save.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

NOTE

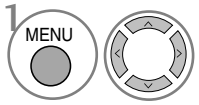
- If you do not finish the set-up Installation Guide by pressing **EXIT** or if you time out on the OSD (On Screen Display) the installation menu will continuously appear whenever the set is switched on until the set up is completed.
- If you select the wrong local country, teletext may not appear correctly on the screen and some problems may occur during teletext operation.
- The CI (Common Interface) function may not be applied based on country broadcasting circumstances.
- DTV mode control buttons may not function based on country broadcasting circumstances.
- In countries that Digital broadcasting regulation isn't fixed, some DTV functions may not work depending on digital broadcasting circumstances.

LANGUAGE SELECTION (IN DIGITAL MODE ONLY)

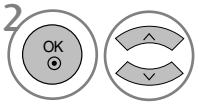
The Audio function allows selection of a preferred language.
If audio data in a selected language is not broadcast, the default language audio will be played.

Use the Subtitle function when two or more subtitle languages are broadcast. If subtitle data in a selected language is not broadcast, the default language subtitle will be displayed.

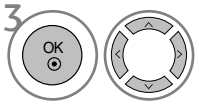
When the languages you selected as the primary for Audio Language and Subtitle Language are not supported, you can select language in secondary category.



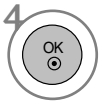
Select **OPTION**.



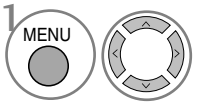
Select **Audio Language**, **Subtitle Language**.



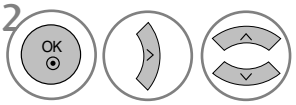
Select your desired language.



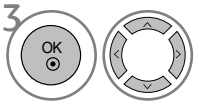
Save.



Select **OPTION**.



Select **Hard of Hearing(▯)**.



Select **On** or **Off**.

• Press the **BACK** button to move to the previous menu screen.

< **Audio Language Selection** >

► When two or more audio languages are broadcast, you can select the audio language.

Audio Language OSD Information

Display	Status
N.A	Not Available
MPEG	MPEG Audio
DD	Dolby Digital Audio
	Audio for “Visual Impaired”
ABC	Audio for “Hearing Impaired”

< **Subtitle Language Selection** >

► When two or more subtitle languages are broadcast, you can select the subtitle language with the **SUBTITLE** button on the remote control.

► Press the ▲ ▼ button to select a subtitle language.

Subtitle Language OSD Information

Display	Status
N.A	Not Available
☰	Teletext Subtitle
ABC	Subtitle for “Hard of Hearing”

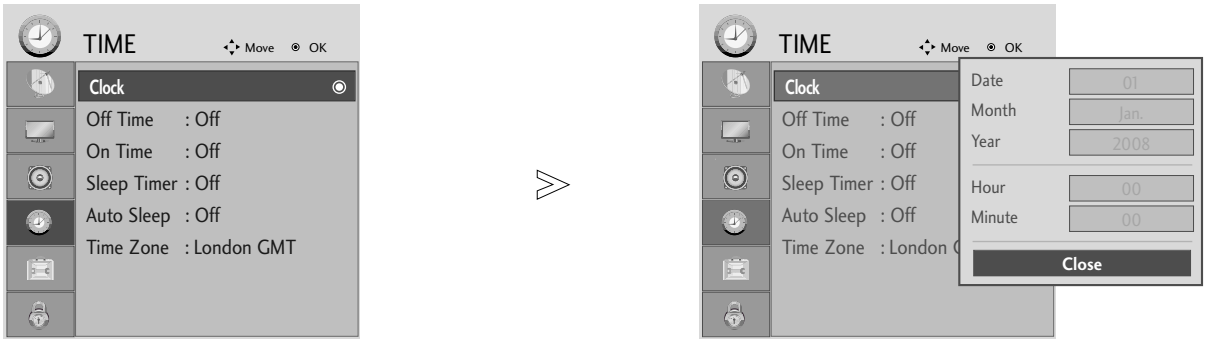
- The audio/subtitles can be displayed in a simpler form with 1 to 3 characters broadcast by the service provider.
- When you select supplementary Audio (Audio for “Visual/Hearing Impaired”) it may output a part of the Main audio.

TIME SETTING

CLOCK SETUP

The clock is set automatically when receiving a digital signal. (You can set the clock manually only if the set has no DTV signal.)

You must set the time correctly before using on/off timer function.



1 MENU

Select **TIME**.

2 OK

Select **Clock**.

3 OK

Select either the year, date, or time option.

4

Set the year, date, and time options.

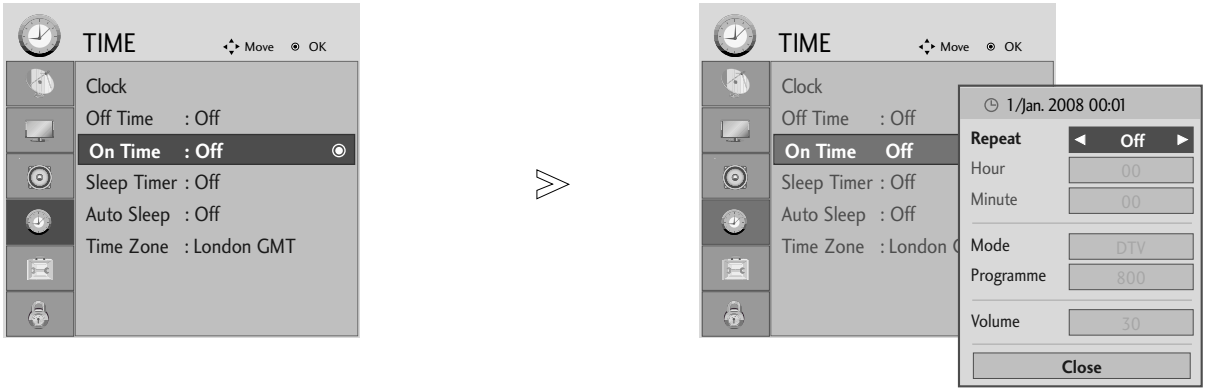
- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

TIME SETTING

AUTO ON/OFF TIMER SETTING

The Off time function automatically switches the set to standby at a preset time.
Two hours after the set is switched on by the on time function it will automatically switch back to standby mode unless a button has been pressed.

The Off time function overrides the On timer function if both are set to the same time.
The set must be in standby mode for the On timer to work.



1 MENU — Select **TIME**.

2 OK — Select **Off time** or **On time**.

3 OK — Select **Repeat**.

4 — Select **Off**, **Once**, **Daily**, **Mon ~ Fri**, **Mon ~ Sat**, **Sat ~ Sun** or **Sun**.

5 — Set the hour.

6 — Set the minutes.

- To cancel **On/Off Time** function, select **Off**.
- **For On Time function only**

1 OK — Select **Mode**.

2 — Select **TV**, **DTV** or **Radio**.

3 — Set the programme.

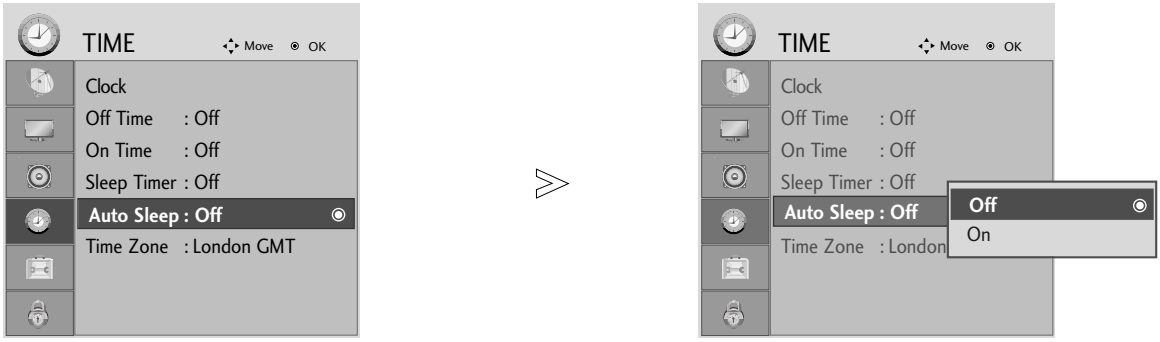
4 — Adjust volume level at switch-on.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

TIME SETTING

AUTO SHUT-OFF SETTING

If the set is switched on and there is no input signal, it will switch off automatically after 10 minutes.



1 MENU — Select **TIME**.

2 OK — Select **Auto Sleep**.

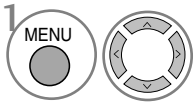
3 OK — Select **Off** or **On**.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

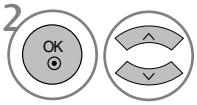
TIME SETTING

TIME ZONE SETUP

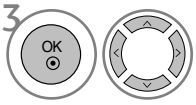
When you select a Time Zone city, the TV time is set by the time offset information based on Time Zone and GMT (Greenwich Mean Time) which is received with the broadcast signal and the time is set automatically by a digital signal.



Select **TIME**.



Select **Time Zone**.

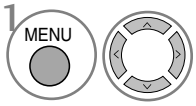


Select your viewing area time zone.

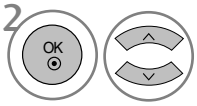
Confirm it.

SLEEP TIMER SETTING

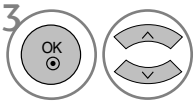
You do not have to remember to switch the set off before you go to sleep.
The sleep timer automatically switches the set off after the preset time has elapsed.



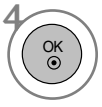
Select **TIME**.



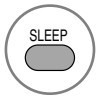
Select **Sleep Timer**.



Select **Off**, **10**, **20**, **30**, **60**, **90**, **120**, **180** or **240 Min.**



Confirm it.



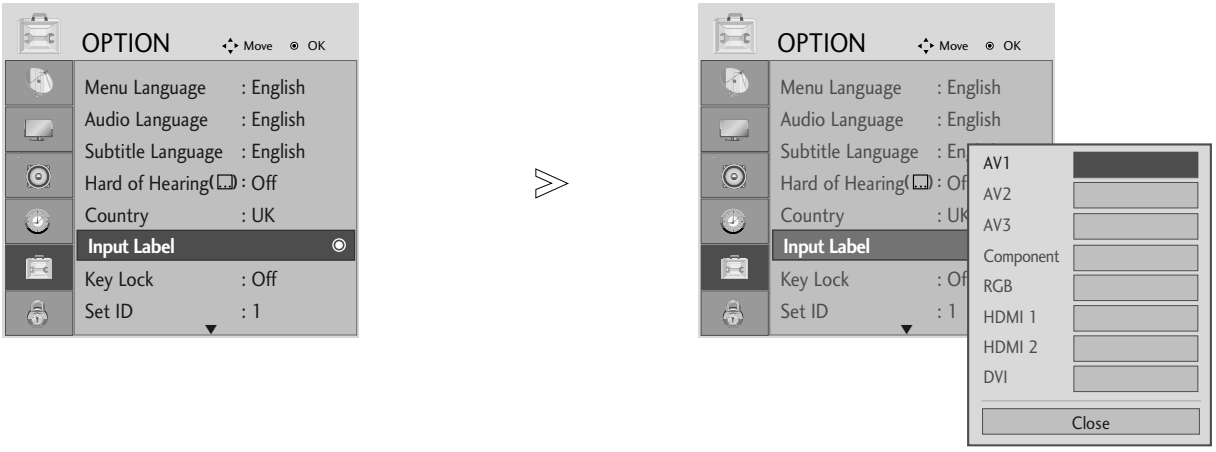
Select the number of minutes.

- When you switch the set off, the preset sleep time is cancelled.
- You can also adjust **Sleep Timer** in the **TIME** menu.

PARENTAL CONTROL / RATINGS

INPUT LABEL

Selects a label for each input source.



1 MENU Select **OPTION**.

2 OK Select **Input Label**.

3 OK Select the source.

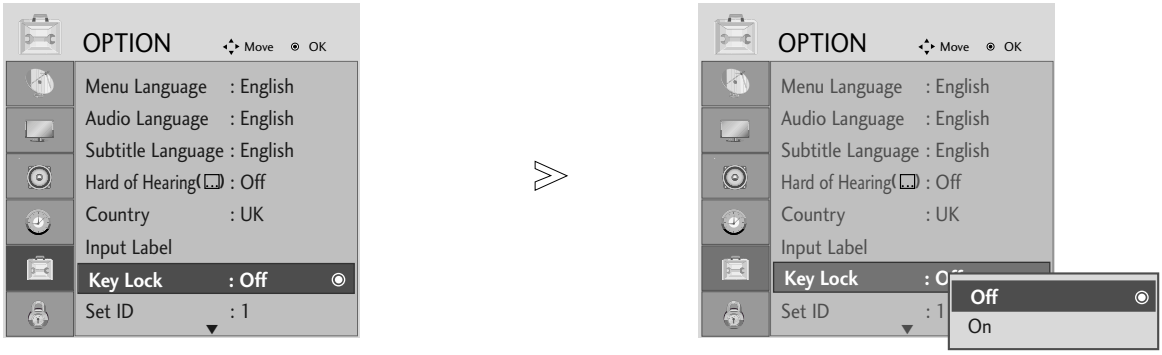
4 Select the label.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

PARENTAL CONTROL / RATINGS

KEY LOCK

The set can be configured so that the remote control is required to control it. This feature can be used to prevent unauthorized viewing.



1 MENU — Select **OPTION**.

2 OK — Select **Key Lock**.

3 OK — Select **On** or **Off**.

4 OK — Save.

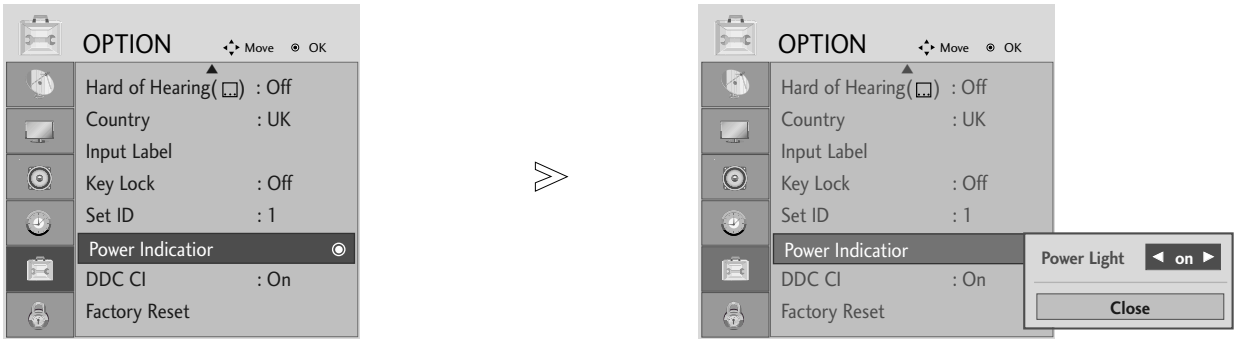
- In **Key Lock** '**On**', if the set is turned off, press the ⏻ / I, **INPUT**, **PR** ▲ ▼ button on the TV or **POWER**, **INPUT**, **PR** + - or NUMBER buttons on the remote control.
- With the **Key Lock On**, the display ' **Key Lock On** ' appears on the screen if any button on the front panel is pressed while viewing the TV.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

PARENTAL CONTROL / RATINGS

POWER INDICTOR

It helps you control LED when power is turned on.



1 MENU

Select **OPTION**.

2 OK

Select **Power Indicator**.

3 OK

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

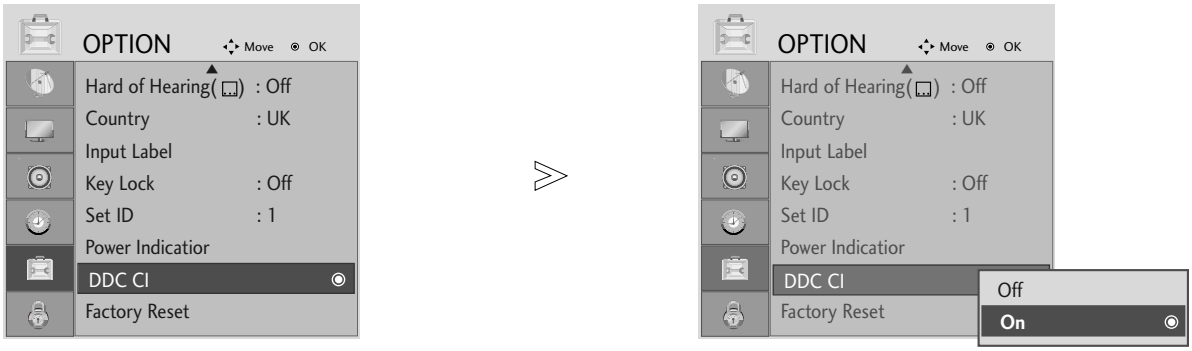
PARENTAL CONTROL / RATINGS

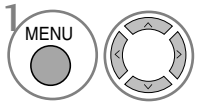
DDC CI(Only RGB, DVI mode)

DDC/CI (Display Data Channel Command Interface) is a communication protocol for communications between PC and set.

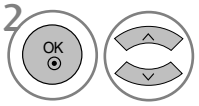
DDC/CI makes it possible to adjust and setup detailed functions on PC instead of the set OSD

Set can be adjusted with PC by connecting communication between PC and set when DDC/CI is ON, and set cannot be adjusted with PC because communication between PC and set is disconnected when DDC/CI is OFF.





Select **OPTION**.



Select **DDC CI**.

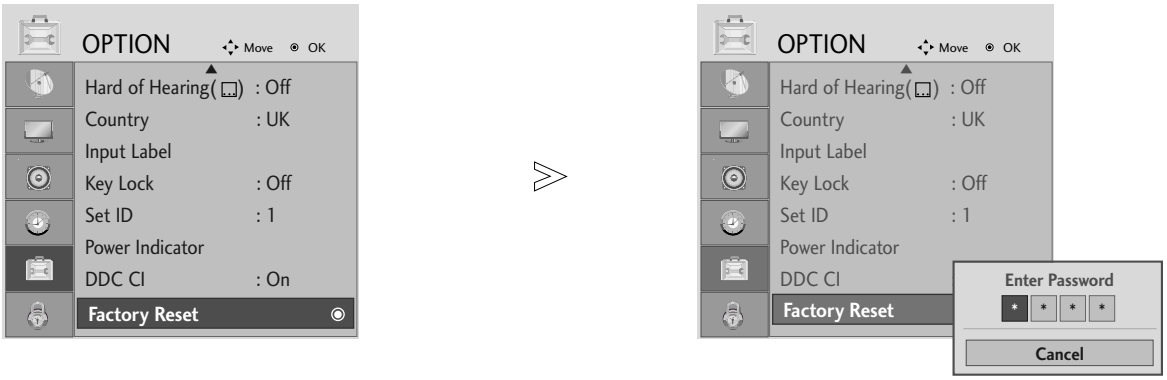
- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

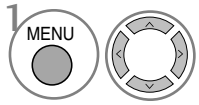
PARENTAL CONTROL / RATINGS

INITIALIZING (RESET TO ORIGINAL FACTORY SETTINGS)

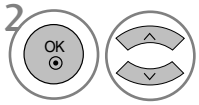
This function operates in current mode.
To initialize the adjusted value.

When the **Lock System** menu is "**On**", the message to enter the password appears.





Select **OPTION**.



Select **Factory Reset**.

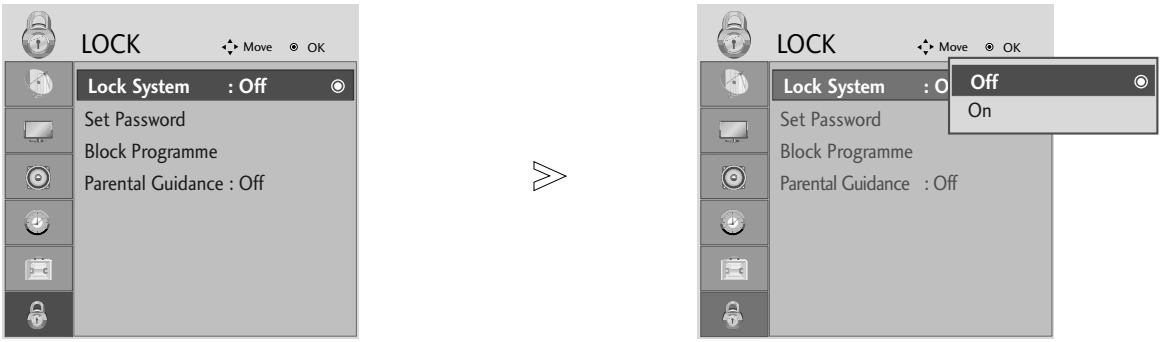
- In **Lock System** "**On**", if you forget your password, press '7', '7', '7', '7' on the remote control handset.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

PARENTAL CONTROL / RATINGS

SET PASSWORD & LOCK SYSTEM

Enter the password, press ‘0’, ‘0’, ‘0’, ‘0’ on the remote control handset.



1 MENU — Select **LOCK**.

2 OK — Select **Lock System**.

3 OK — Select **On**.

4 OK OK — Set the password.

5 — Input a 4-digit password.
Be sure to remember this number!
Re-enter new password to confirm.

- If you forget your password, press ‘7’, ‘7’, ‘7’, ‘7’ on the remote control handset.

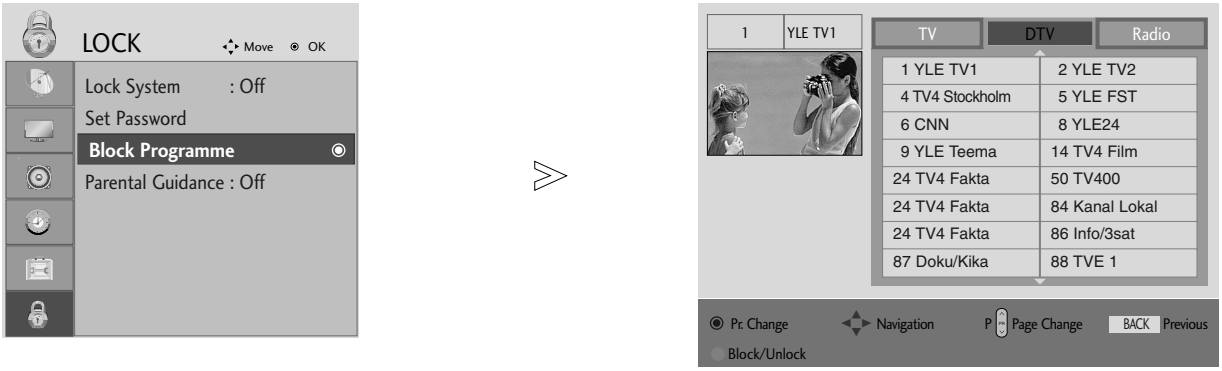
- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

PARENTAL CONTROL / RATINGS

BLOCK PROGRAMME

Blocks any programmes that you do not want to watch or that you do not want your children to watch.

This function is available in Lock System “On”.



1 MENU — Select **LOCK**.

2 OK — Select **Block Programme**.

3 OK — Enter the **Block Programme**.

4 GREEN — Select a programme to be locked.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

PARENTAL CONTROL / RATINGS

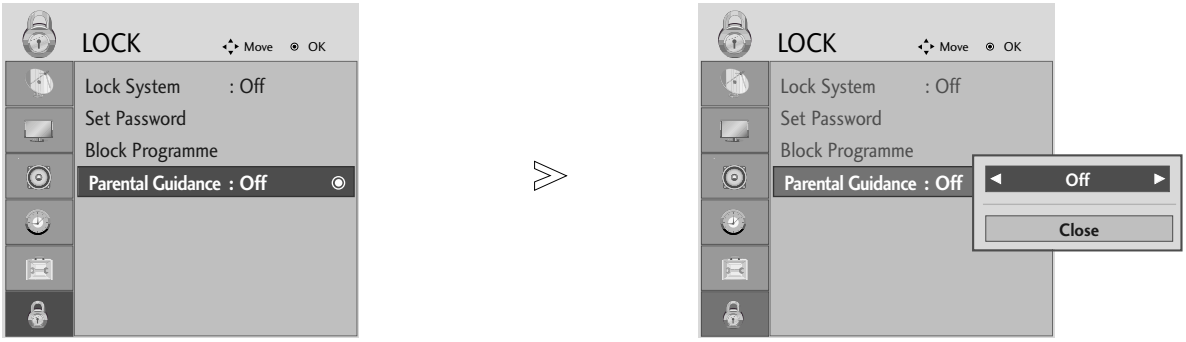
PARENTAL CONTROL (IN DIGITAL MODE ONLY)

This function operates according to information from the broadcasting station. Therefore if the signal has incorrect information, this function does not operate.

A password is required to gain access to this menu.

This set is programmed to remember which option it was last set to even if you switch the set off.

Prevents children from watching certain adult's TV programmes, according to the ratings limit set.



1 MENU

Select **LOCK**.

2 OK

Select **Parental Guidance**.

3 OK

Make appropriate adjustments.

4 OK

Save.

- Press the **MENU** or **EXIT** button to close the menu window.
- Press the **BACK** button to move to the previous menu screen.

TELETEXT

This feature is not available in all countries.

Teletext is a free service broadcast by most TV stations which gives up-to-the-minute information on news, weather, television programmes, share prices and many other topics.

The teletext decoder of this set can support the SIMPLE, TOP and FASTEXT systems. SIMPLE (standard teletext) consists of a number of pages which are selected by directly entering the corresponding page number. TOP and FASTEXT are more modern methods allowing quick and easy selection of teletext information.

SWITCH ON/OFF

Press the **TEXT** button to switch to teletext. The initial page or last page appears on the screen.
Two page numbers, TV station name, date and time are displayed on the screen headline. The first page number indicates your selection, while the second shows the current page displayed.
Press the **TEXT** or **EXIT** button to switch off teletext. The previous mode reappears.

SIMPLE TEXT

■ Page selection

❶ Enter the desired page number as a three-digit number with the NUMBER buttons. If during selection you press a wrong number, you must complete the three-digit number and then re-enter the correct page number.
❷ The **PR+** or - button can be used to select the previous or next page.

TOP TEXT

The user guide displays four fields--red, green, yellow and blue at the bottom of the screen. The yellow field denotes the next group and the blue field indicates the next block.

■ Block / group / page selection

❶ With the blue button you can progress from block to block.
❷ Use the yellow button to proceed to the next group with automatic overflow to the next block.
❸ With the green button you can proceed to the next existing page with automatic overflow to the next group. Alternatively, the **PR+** button can be used.
❹ The red button permits you to return to previous selection. Alternatively, the **PR-** button can be used.

■ Direct page selection

Corresponding to the SIMPLE teletext mode, you can select a page by entering it as a three-digit number using the NUMBER buttons in TOP mode.

TELETEXT

FASTEXT

The teletext pages are colour coded along the bottom of the screen and are selected by pressing the corresponding coloured button.

■ Page selection

❶ Press the button to select the index page.
❷ You can select the pages which are colour coded along the bottom line with the same coloured buttons.
❸ Corresponding to the SIMPLE teletext mode, you can select a page by entering its three digit page number with the NUMBER buttons in FASTEXT mode.
❹ The **PR+** or - button can be used to select the previous or next page.

SPECIAL TELETEXT FUNCTIONS

■ **REVEAL**

Press this button to display concealed information, such as solutions of riddles or puzzles.
Press this button again to remove the information from the display.

■ **UPDATE**

Displays the TV picture on the screen while waiting for the new teletext page. The display will appear at the top left hand corner of the screen. When the updated page is available then display will change to the page number. Press this button to view the updated teletext page.

■ **TIME**

When viewing a TV programme, press this button to display the time at the top right hand corner of the screen. Press this button again to remove the display. In teletext mode, press this button to select a sub page number. The sub page number is displayed at the bottom of the screen. To hold or change the sub page, press the RED/GREEN, **PR+** or - or NUMBER buttons.
Press again to exit this function.

■ **HOLD**

Stops the automatic page change which will occur if a teletext page consists of two or more sub pages. The number of sub pages and the sub page displayed is usually shown on the screen below the time. When this button is pressed, the stop symbol is displayed at the top left-hand corner of the screen and the automatic page change is inhibited. To continue press this button again.

DIGITAL TELETEXT

***This function works in UK only.**

The set gives you access to a digital teletext which is greatly improved in various aspects such as text, graphics and so on.
This digital teletext can be accessed by special digital teletext services and specific services which broadcast digital teletext.
You should select off from the subtitle language to display teletext by pressing **SUBTITLE** button.

TELETEXT WITHIN DIGITAL SERVICE

1. Press the numeric or **PR** + or - button to select a digital service which broadcasts digital teletext.
   To know which are digital teletext services, refer to the EPG service list.
2. Follow the indications on digital teletext and move onto the next step by pressing **TEXT**, **OK**, ▲ or ▼, ◄ or ►, **RED**, **GREEN**, **YELLOW**, **BLUE** or **NUMBER** buttons and so on.
3. To change digital teletext service, just select a different service by the numeric or **PR** + or - button.

If pressing the **MENU**, **GUIDE** or **INFO** ⓘ button, the teletext service disappear temporarily. When pressing these buttons again, the teletext service is appeared.

TELETEXT IN DIGITAL SERVICE

1. Press the numeric or **PR** + or - button to select a certain service which broadcasts digital teletext.
2. Press the **TEXT** or colour button to switch on teletext.
3. Follow the indications on digital teletext and move onto the next step by pressing **OK**, ▲ or ▼, ◄ or ►, **RED**, **GREEN**, **YELLOW**, **BLUE** or **NUMBER** buttons and so on.
4. Press the **TEXT** or colour button to switch off digital teletext and return to TV viewing.

Some services may allow you to access text services by pressing the **RED** button.

If pressing the **MENU**, **GUIDE** or **INFO** ⓘ button, the teletext service disappears temporarily. When pressing these buttons again, the teletext service is appears.

APPENDIX

TROUBLESHOOTING

The operation does not work normally.	
The remote control doesn't work	■ Check to see if there is any object between the product and the remote control causing obstruction. Ensure you are pointing the remote control directly at the set. ■ Ensure that the batteries are installed with correct polarity (+ to +, - to -). ■ Ensure that the correct remote operating mode is set: TV, VCR, etc. ■ Install new batteries.
Power is suddenly turned off	■ Is the sleep timer set? ■ Check the power control settings. Power interrupted. ■ No broadcast on station tuned with **Auto sleep** activated.

The video function does not work.	
No picture &No sound	■ Check whether the product is turned on. ■ Try another channel. The problem may be with the broadcast. ■ Is the power cord inserted into wall power outlet? ■ Check your antenna direction and/or location. ■ Test the wall power outlet, plug another product's power cord into the outlet where the product's power cord was plugged in.
Picture appears slowly after switching on	■ This is normal, the image is muted during the product startup process. Please contact your service centre, if the picture has not appeared after five minutes.
No color, poor colour, or poor picture	■ Adjust Colour in menu option. ■ Keep a sufficient distance between the product and the VCR. ■ Try another channel. The problem may be with the broadcast. ■ Are the video cables installed properly? ■ Activate any function to restore the brightness of the picture.
Horizontal/vertical bars or picture shaking	■ Check for local interference such as an electrical appliance or power tool.
Poor reception on some channels	■ Station or cable product experiencing problems, tune to another station. ■ Station signal is weak, reorient antenna to receive weaker station. ■ Check for sources of possible interference.
Lines or streaks in pictures	■ Check antenna (Change the direction of the antenna).

APPENDIX

The audio function does not work.	
Picture OK & No sound	■ Press the **VOL +** or **-** button. ■ Sound muted? Press **MUTE** button. ■ Try another channel. The problem may be with the broadcast. ■ Are the audio cables installed properly?
No output from one of the speakers	■ Adjust **Balance** in menu option.
Unusual sound from inside the product	■ A change in ambient humidity or temperature may result in an unusual noise when the product is turned on or off and does not indicate a problem with the product.

Only RGB/DVI mode applied

No image is displayed.	
Power is on, power indictor is blue but the screen appears extremely dark.	■ Adjust brightness and contrast again.
Does the power indicator look amber?	■ If the product is in power saving mode, move the mouse or press any key.
Does the 'Out of range' message appear?	■ The signal from the PC (Video card) is out of the vertical or horizontal frequency range of the product. Adjust the frequency range by referring to the Specifications in this user's guide.
Does the 'Check signal cable' message appear?	■ The signal cable between PC and product is not connected. Check the signal cable. ■ Press the 'INPUT' button in the remote control to check the input signal.

APPENDIX

'Unknown Product' message appears when the product is connected.	
Did you install the driver?	■ Install the product driver, which is provided with the product, or download it from the web site. (http://www.lge.com) ■ See if the plug_&_play function is supported by referring to the video card user's guide.

After-image appears on the product.	
After-image appears when the product is turned off.	■ If you use a fixed image for a long time, the pixels may be damaged quickly. Use the screen saver function.

Screen color is abnormal.	
Screen has poor color resoluion (16_colors).	■ Set screen color resolution to more than 24 bits (true color) Select control Panel-Display-Settings-Color Table menu in Windows.
Screen color is unstable or mono color.	■ Check the connection status of the signal cable.
Do back spots appear on the screen?	■ Several pixels (red, green, white or black color) may appear on the screen, which can be attributable to the unique characteristics of the LCD panel. It is not a malfunction of the LCD.

Only RGB mode applied

The screen image looks abnormal.	
Is the screen position wrong?	■ Adjust the Position menu in OSD. ■ See if the video card resolution and frequency are supported by the product. If the frequency is out of range, set to the recommended resolution in the Control Panel-Display-Setting menu.
Do thin lines appear on the background screen?	■ Adjust the Clock menu in OSD.
Horizontal noise appears or the characters look blurred.	■ Adjust the Phase menu in OSD.

APPENDIX

MAINTENANCE

Early malfunctions can be prevented. Careful and regular cleaning can extend the amount of time you can enjoy your new set.

Caution: Be sure to turn the power off and unplug the power cord before you begin any cleaning.

Cleaning the Screen

1. To keep the dust off your screen for a while, wet a soft cloth in a mixture of lukewarm water and a little fabric softener or dishwashing detergent. Wring the cloth until it's almost dry, and then use it to wipe the screen.
2. Make sure the excess water is off the screen, and then let it air-dry before you turn on your set.

Cleaning the Cabinet

- To remove dirt or dust, wipe the cabinet with a soft, dry, lint-free cloth.
- Please be sure not to use a wet cloth.

Extended Absence

⚠ CAUTION

► If you expect to leave your set dormant for a long time (such as a vacation), it's a good idea to unplug the power cord to protect against possible damage from lightning or power surges.

APPENDIX

PRODUCT SPECIFICATIONS

<M197WD>

LCD Panel	Screen Type	18.51 inches Wide (470.1mm) TFT (Thin Film Transistor) LCD (Liquid Crystal Display) Panel Visible diagonal size: 470.1mm
	Pixel Pitch	0.10(H) x 0.30(V) mm
Video Signal	Max. Resolution	1366 X 768 @60 Hz
	Recommended Resolution	1360 X 768 @60 Hz
	Horizontal Frequency	30 - 61 kHz
	Vertical Frequency	56 - 75 Hz
	Synchronization Type	Separate Sync, Digital
Input Connector		TV, D-Sub Analog, SCART*2, PC Audio In, component, DVI-D, HDMI*2, CVBS, S-VIDEO
Power	Rated Voltage	AC100-240V~ 50/60 Hz 0.6A
	Power Consumption	On Mode : 35W (typ.) Sleep Mode ≤ 1W (**RGB**) Off Mode ≤ 1W
Tilt	Tilt Range	-5 ~ 15˚
Dimensions (Width x Height x Depth) Weight		455.6 x 362.8 x 193.2 mm (17.94 x 14.28 x 7.61 inches) 3.8 kg / 8.4 lbs
Environmental conditions	Operating Temperature Operating Humidity	10 ~ 35˚C 20 ~ 80%
	Storage Temperature Storage Humidity	-10 ~ 60˚C 5 ~ 90%

■ The specifications shown above may be changed without prior notice for quality improvement.

APPENDIX

PRODUCT SPECIFICATIONS

<M227WD>

LCD Panel	Screen Type	21.53 inches Wide (546.86 mm) TFT (Thin Film Transistor) LCD (Liquid Crystal Display) Panel Visible diagonal size: 546.86 mm
	Pixel Pitch	0.24825(H) x 0.24825(V) mm
Video Signal	Max. Resolution	1920 X 1080 @60 Hz
	Recommended Resolution	1920 X 1080 @60 Hz
	Horizontal Frequency	30 - 83 kHz
	Vertical Frequency	56 - 75 Hz
	Synchronization Type	Separate Sync, Digital
Input Connector		TV, D-Sub Analog, SCART*2, PC Audio In, component, DVI-D, HDMI*2, CVBS, S-VIDEO
Power	Rated Voltage	AC100-240V~ 50/60 Hz 0.9A
	Power Consumption	On Mode : 55W (typ.) Sleep Mode ≤ 1W (**RGB**) Off Mode ≤ 1W
Tilt	Tilt Range	-5 ~ 15˚
Dimensions (Width x Height x Depth) Weight		519.8 x 400.5 x 193.2 mm (20.46 x 15.77 x 7.61 inches) 4.7 kg / 10.4 lbs
Environmental conditions	Operating Temperature	10 ~ 35˚C
	Operating Humidity	20 ~ 80%
	Storage Temperature	-10 ~ 60˚C
	Storage Humidity	5 ~ 90%

■ The specifications shown above may be changed without prior notice for quality improvement.

APPENDIX

PRODUCT SPECIFICATIONS

<M237WD>

LCD Panel	Screen Type	23 inches Wide (584.2 mm) TFT (Thin Film Transistor) LCD (Liquid Crystal Display) Panel Visible diagonal size : 584.2 mm
	Pixel Pitch	0.266(H) x 0.266(V) mm
Video Signal	Max. Resolution	1920 X 1080 @60 Hz
	Recommended Resolution	1920 X 1080 @60 Hz
	Horizontal Frequency	30 - 83 kHz
	Vertical Frequency	56 - 75 Hz
	Synchronization Type	Separate Sync, Digital
Input Connector		TV, D-Sub Analog, SCART*2, PC Audio In, component, DVI-D, HDMI*2, CVBS, S-VIDEO
Power	Rated Voltage	AC 100-240V ~ 50/60 Hz 1.0A
	Power Consumption	On Mode : 55W (typ.) Sleep Mode ≤ 1W (RGB) Off Mode ≤ 1W
Tilt	Tilt Range	-5 ~ 15˚
Dimensions (Width x Height x Depth) Weight		560.8 x 427 x 193.2 mm (22.08 x 16.81 x 7.61 inches) 5.6 kg / 12.35 lbs
Environmental conditions	Operating Temperature Operating Humidity	10 ~ 35˚C 20 ~ 80%
	Storage Temperature Storage Humidity	-10 ~ 60˚C 5 ~ 90%

■ The specifications shown above may be changed without prior notice for quality improvement.

APPENDIX

PROGRAMMING THE REMOTE CONTROL

The remote is a multi-brand or universal remote. It can be programmed to operate most remote-controllable devices of other manufacturers.
Note that the remote may not control all models of other brands.

Programming a code into a remote mode

1. Test your remote control.
   To find out whether your remote control can operate the component without programming, turn on the component such as a VCR and press the corresponding mode button (such as a **DVD** or **VCR**) on the remote control, while pointing at the component. Test the **POWER** and **PR + / -** buttons to see if the component responds properly. If not, the remote requires programming to operate the device.

2. Turn on the component to be programmed, then press the corresponding mode button (such as a **DVD** or **VCR**) on the remote control. The remote control button of desired device is lighted.

3. Press the **MENU** and **MUTE** buttons simultaneously, the remote control is ready to be programmed for the code.

4. Enter a code number using the number buttons on the remote control. Programming code numbers for the corresponding component can be found on the following pages. Again, if the code is correct, the device will turn off.

5. Press the **MENU** button to store the code.

6. Test the remote control functions to see if the component responds properly. If not, repeat from step 2.

PROGRAMMING CODE

DVD

Brand	Codes	Brand	Codes	Brand	Codes
APEX DIGITAL	022	MITSUBISHI	002	RCA	005 006
DENON	020 014	NAD	023	SAMSUNG	011 015
GE	005 006	ONKYO	008 017	SONY	007
HARMAN KARDON	027	PANASONIC	003 009	THOMPSON	005 006
JVC	012	PHILIPS	013	TOSHIBA	019 008
LG	001 010 016 025	PIONEER	004 026	YAMAHA	009 018
MAGNAVOX	013	PROCEED	021	ZENITH	010 016 025
MARANTZ	024	PROSCAN	005 006		

APPENDIX

VCR

Brand	Codes				Brand	Codes				Brand	Codes			
AIWA	034				MAGNAVOX	031	033	034	041	SAMSUNG	032	040	102	104
AKAI	016	043	046	124		067	068				105	107	109	112
	125	146			MARANTZ	012	031	033	067		113	115	120	122
AMPRO	072					069					125			
ANAM	031	033	103		MARTA	101				SANSUI	022	043	048	135
AUDIO DYNAMICS	012	023	039	043	MATSUI	027	030			SANYO	003	007	010	014
BROKSONIC	035	037	129		MEI	031	033				102	134		
CANON	028	031	033		MEMOREX	003	010	014	031	SCOTT	017	037	112	129
CAPEHART	108					033	034	053	072		131			
CRAIG	003	040	135			101	102	134	139	SEARS	003	008	009	010
CURTIS MATHES	031	033	041		MGA	045	046	059			013	014	017	020
DAEWOO	005	007	010	064	MINOLTA	013	020				031	042	073	081
	065	108	110	111	MITSUBISHI	013	020	045	046		101			
	112	116	117	119		049	051	059	061	SHARP	031	054	149	
DAYTRON	108					151				SHINTOM	024			
DBX	012	023	039	043	MTC	034	040			SONY	003	009	031	052
DYNATECH	034	053			MULTITECH	024	034				056	057	058	076
ELECTROHOME	059				NEC	012	023	039	043		077	078	149	
EMERSON	006	017	025	027		048				SOUNDESIGN	034			
	029	031	034	035	NORDMENDE	043				STS	013			
	036	037	046	101	OPTONICA	053	054			SYLVANIA	031	033	034	059
	129	131	138	153	PANASONIC	066	070	074	083		067			
FISHER	003	008	009	010		133	140	145		SYMPHONIC	034			
FUNAI	034									TANDY	010	034		
GE	031	033	063	072	PENTAX	013	020	031	033	TATUNG	039	043		
	107	109	144	147		063				TEAC	034	039	043	
GO VIDEO	132	136			PHILCO	031	034	067		TECHNICS	031	033	070	
HARMAN KARDON		012	045		PHILIPS	031	033	034	054	TEKNIKA	019	031	033	034
HITACHI	004	018	026	034		067	071	101			101			
	043	063	137	150	PILOT	101				THOMAS	034			
INSTANTREPLAY	031	033			PIONEER	013	021	048		TMK	006			
JCL	031	033			PORTLAND	108				TOSHIBA	008	013	042	047
JCPENNY	012	013	015	033	PULSAR	072					059	082	112	131
	040	066	101		QUARTZ	011	014			TOTEVISION	040	101		
JENSEN	043				QUASAR	033	066	075	145	UNITECH	040			
JVC	012	031	033	043	RCA	013	020	033	034	VECTOR RESEARCH	012			
	048	050	055	060		040	041	062	063	VICTOR	048			
	130	150	152			107	109	140	144	VIDEO CONCEPTS	012	034	046	
KENWOOD	014	034	039	043		145	147			VIDEOSONIC	040			
	047	048			REALISTIC	003	008	010	014	WARDS	003	013	017	024
LG (GOLDSTAR)	001	012	013	020		031	033	034	040		031	033	034	040
	101	106	114	123		053	054	101			053	054	131	
LLOYD	034				RICO	058				YAMAHA	012	034	039	043
LXI	003	009	013	014	RUNCO	148				ZENITH	034	048	056	
	017	034	101	106	SALORA	014					058	072	080	101
MAGIN	040													

APPENDIX
IR CODES

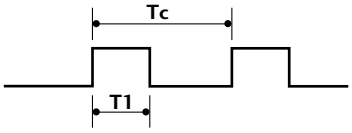
1. How to Connect

■ Connect your wired remote control to the Remote Control port on the set.

2. Remote Control IR Codes

■ **Output waveform**

Single pulse, modulated with 37.917 KHz signal at 455 KHz



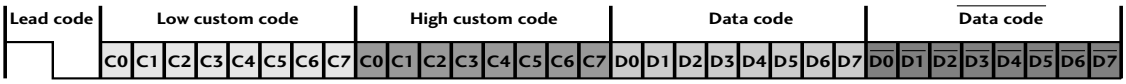
Carrier frequency

FCAR = 1/TC = fOSC/12

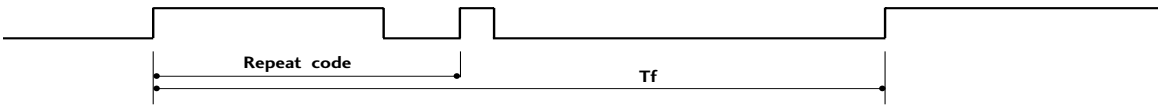
Duty ratio = T1/TC = 1/3

■ **Configuration of frame**

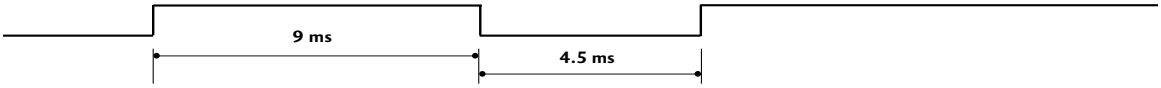
1st frame


Lead code
Low custom code
High custom code
Data code
Data code
C0 C1 C2 C3 C4 C5 C6 C7 C0 C1 C2 C3 C4 C5 C6 C7 D0 D1 D2 D3 D4 D5 D6 D7 D0 D1 D2 D3 D4 D5 D6 D7

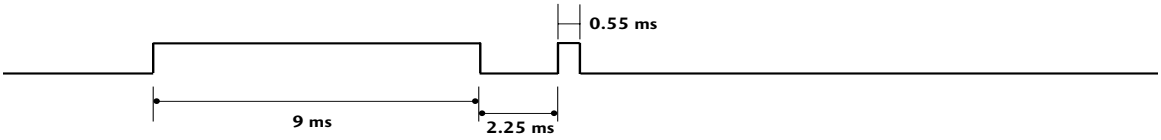
Repeat frame



■ **Lead code**

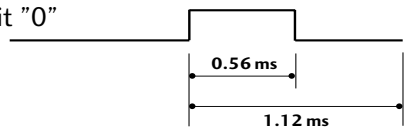


■ **Repeat code**

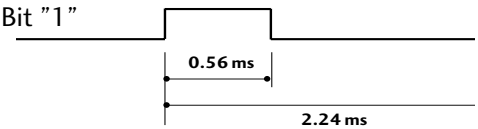


■ **Bit description**

Bit "0"

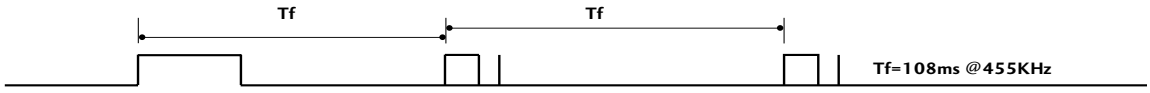


Bit "1"



■ **Frame interval: Tf**

The waveform is transmitted as long as a key is depressed.



APPENDIX

Code (Hexa)	Function	Note
00	PR +	R/C BUTTON
01	PR -	R/C BUTTON
02	VOL +	R/C BUTTON
03	VOL -	R/C BUTTON
40	Up (▲)	R/C BUTTON
41	Down (▼)	R/C BUTTON
06	Right (►)	R/C BUTTON
07	Left (◄)	R/C BUTTON
08	POWER	R/C BUTTON (POWER ON/OFF)
09	MUTE	R/C BUTTON
10	Number Key 0	R/C BUTTON
11	Number Key 1	R/C BUTTON
12	Number Key 2	R/C BUTTON
13	Number Key 3	R/C BUTTON
14	Number Key 4	R/C BUTTON
15	Number Key 5	R/C BUTTON
16	Number Key 6	R/C BUTTON
17	Number Key 7	R/C BUTTON
18	Number Key 8	R/C BUTTON
19	Number Key 9	R/C BUTTON
0B	INPUT	R/C BUTTON
AA	INFO ⓘ	R/C BUTTON
AB	GUIDE	R/C BUTTON
56	SUBTITLE	R/C BUTTON
5B	EXIT	R/C BUTTON
1E	FAV	R/C BUTTON
1A	Q.VIEW	R/C BUTTON
50	D/A TV	R/C BUTTON
F0	TV/RADIO	R/C BUTTON
0A	I/II	R/C BUTTON
0E	SLEEP	R/C BUTTON
43	MENU	R/C BUTTON
44	OK(◉)	R/C BUTTON
53	LIST	R/C BUTTON
20	TEXT	R/C BUTTON
2A	REVEAL	R/C BUTTON
26	TIME	R/C BUTTON
28	BACK	R/C BUTTON
62	UPDATE	R/C BUTTON
70	INDEX	R/C BUTTON
65	HOLD	R/C BUTTON
61	BLUE Key	R/C BUTTON
63	YELLOW Key	R/C BUTTON
71	GREEN Key	R/C BUTTON
72	RED Key	R/C BUTTON
79	RATIO	R/C BUTTON

APPENDIX

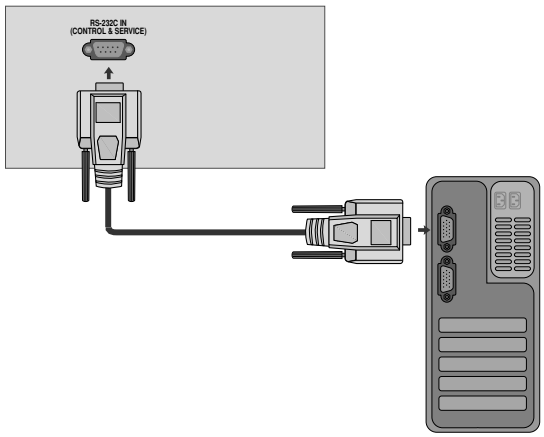
EXTERNAL CONTROL DEVICE SETUP

RS-232C Setup

Connect the RS-232C (serial port) input jack to an external control device (such as a computer or an A/V control system) to control the product's functions externally.

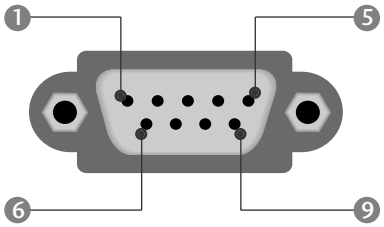
Connect the serial port of the control device to the RS-232C jack on the product back panel.

Note: RS-232C connection cables are not supplied with the product.



Type of Connector; D-Sub 9-Pin Male

No.	Pin Name
1	No connection
2	RXD (Receive data)
3	TXD (Transmit data)
4	DTR (DTE side ready)
5	GND
6	DSR (DCE side ready)
7	RTS (Ready to send)
8	CTS (Clear to send)
9	No Connection



RS-232C Configurations

7-Wire Configurations (Standard RS-232C cable)

	PC	TV	
RXD	2	3	TXD
TXD	3	2	RXD
GND	5	5	GND
DTR	4	6	DSR
DSR	6	4	DTR
RTS	7	8	CTS
CTS	8	7	RTS
	D-Sub 9	D-Sub 9	

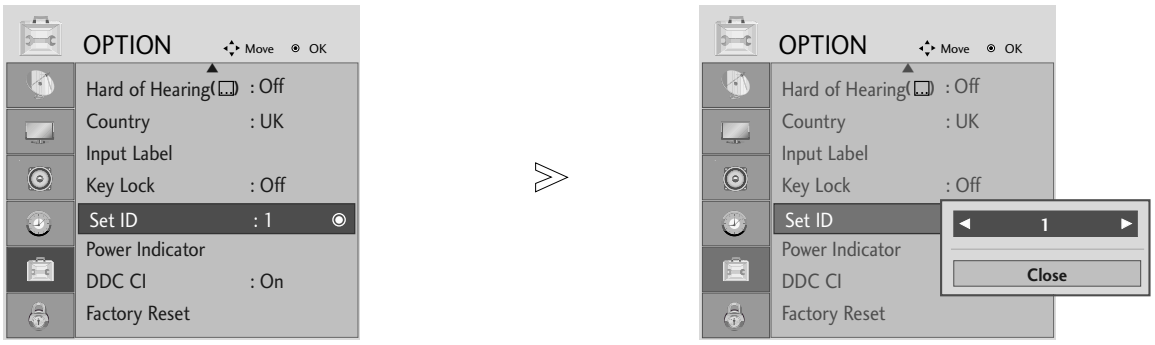
3-Wire Configurations(Not standard)

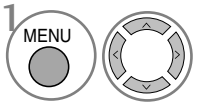
	PC	TV	
RXD	2	3	TXD
TXD	3	2	RXD
GND	5	5	GND
DTR	4	6	DTR
DSR	6	4	DSR
RTS	7	7	RTS
CTS	8	8	CTS
	D-Sub 9	D-Sub 9	

APPENDIX

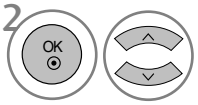
Set ID

Use this function to specify a set ID number.
Refer to 'Real Data Mapping'. ▸ **p. 100**

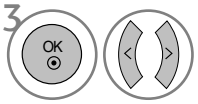




Select **OPTION**.



Select **Set ID**.



adjust **Set ID** to choose the desired TV ID number.
The adjustment range of SET ID is 1~99.

• Press the **BACK** button to move to the previous menu screen.

APPENDIX

Communication Parameters

- Baud rate : 9600 bps (UART)
- Data length : 8 bits
- Parity : None
- Stop bit : 1 bit
- Communication code : ASCII code
- Use a crossed (reverse) cable.

Command Reference List

	COMMAND 1	COMMAND 2	DATA (Hexadecimal)
01. Power	k	a	00 ~ 01
02. Aspect Ratio	k	c	Refer to p. 98
03. Screen Mute	k	d	00 ~ 01
04. Volume Mute	k	e	00 ~ 01
05. Volume Control	k	f	00 ~ 64
06. Contrast	k	g	00 ~ 64
07. Brightness	k	h	00 ~ 64
08. Colour	k	i	00 ~ 64
09. Tint	k	j	00 ~ 64
10. Sharpness	k	k	00 ~ 64
11. OSD Select	k	l	00 ~ 01
12. Remote control lock mode	k	m	00 ~ 01
13. Balance	k	t	00 ~ 64
14. Colour Temperature	k	u	00 ~ 02
15. Abnormal Status	k	z	00 ~ 09
16. Auto Configure	j	u	01
17. Equalize	j	v	Refer to p. 100
18. Tune Command	m	a	Refer to p. 101
19. Channel Add/Skip	m	b	00 ~ 01
20. Key	m	c	Key Code
21. Control Backlight	m	g	00 ~ 64
22. Input select (Main)	x	b	Refer to p. 101

* When setting 15 ~ 22, a menu does not appear on screen.

Transmission / Receiving Protocol

Transmission

[Command1][Command2][ ][Set ID][ ][Data][Cr]

* [Command 1] : First command to control the TV. (j, k, m or x)
* [Command 2] : Second command to control the TV.
* [Set ID] : You can adjust the set ID to choose desired monitor ID number in option menu. Adjustment range is 1 ~ 99. When selecting Set ID '0', every connected set is controlled. Set ID is indicated as decimal (1~99) on menu and as Hexa decimal (0x0~0x63) on transmission/ receiving protocol.
* [DATA] : To transmit command data. Transmit 'FF' data to read status of command.
* [Cr] : Carriage Return ASCII code '0x0D'
* [ ] : ASCII code 'space (0x20)'

OK Acknowledgement

[Command2][ ][Set ID][ ][OK][Data][x]

* The TV transmits ACK (acknowledgement) based on this format when receiving normal data. At this time, if the data is in data read mode, it indicates present status data. If the data is in data write mode, it returns the data of the PC computer.

Error Acknowledgement

[Command2][ ][Set ID][ ][NG][Data][x]

* The TV transmits ACK (acknowledgement) based on this format when receiving abnormal data from nonviable functions or communication errors.

APPENDIX

01. Power (Command: k a)

▶ To control Power On/Off of the TV.

Transmission

[k] [a] [ ] [Set ID] [ ] [Data] [Cr]

Data 00 : Power Off 01 : Power On

Ack

[a] [ ] [Set ID] [ ] [OK/NG] [Data] [x]

▶ To show Power On/Off.

Transmission

[k] [a] [ ] [Set ID] [ ] [FF] [Cr]

Ack

[a] [ ] [Set ID] [ ] [OK/NG] [Data] [x]

* Similarly, if other functions transmit '0xFF' data based on this format, Acknowledgement data feed back presents status about each function.
* OK Ack.,Error Ack. and other messages may be display on the screen when TV is power On.

02. Aspect Ratio (Command: k c) (Main Picture Size)

▶ To adjust the screen format. (Main picture format)
You can also adjust the screen format using the **Aspect Ratio** in the PICTURE menu.

Transmission

[k] [c] [ ] [Set ID] [ ] [Data] [Cr]

Data 01 : Normal screen (4:3)
02 : Wide screen (16:9)
04 : Zoom1
05 : Zoom2
06 : Original
07 : 14:9
09 : Just Scan

Ack

[c] [ ] [Set ID] [ ] [OK/NG] [Data] [x]

* Using the PC input, you select either 16:9 or 4:3 screen aspect ratio.
* In **HDMI/Component** (over 720p) mode, **Just Scan** is available.
* You can only select **Original** in UK digital teletext (MHEG-5).

03. Screen Mute (Command: k d)

▶ To select screen mute on/off.

Transmission

[k] [d] [ ] [Set ID] [ ] [Data] [Cr]

Data 00 : Screen mute off (Picture on)
01 : Screen mute on (Picture off)

Ack

[d] [ ] [Set ID] [ ] [OK/NG] [Data] [x]

04. Volume Mute (Command: k e)

▶ To control volume mute on/off.
You can also adjust mute using the MUTE button on remote control.

Transmission

[k] [e] [ ] [Set ID] [ ] [Data] [Cr]

Data 00 : Volume mute on (Volume off)
01 : Volume mute off (Volume on)

Ack

[e] [ ] [Set ID] [ ] [OK/NG] [Data] [x]

05. Volume Control (Command: k f)

▶ To adjust volume.
You can also adjust volume with the VOLUME buttons on remote control.

Transmission

[k] [f] [ ] [Set ID] [ ] [Data] [Cr]

Data Min : 00 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 100.

Ack

[f] [ ] [Set ID] [ ] [OK/NG] [Data] [x]

06. Contrast (Command: k g)

▶ To adjust screen contrast.
You can also adjust contrast in the PICTURE menu.

Transmission

[k] [g] [ ] [Set ID] [ ] [Data] [Cr]

Data Min : 00 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 100.

Ack

[g] [ ] [Set ID] [ ] [OK/NG] [Data] [x]

07. Brightness (Command: k h)

▶ To adjust screen brightness.
You can also adjust brightness in the PICTURE menu.

Transmission

[k] [h] [ ] [Set ID] [ ] [Data] [Cr]

Data Min : 00 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 100.

Ack

[h] [ ] [Set ID] [ ] [OK/NG] [Data] [x]

08. Colour (Command: k i)

▶ To adjust the screen colour.
You can also adjust colour in the PICTURE menu.

Transmission

[k] [i] [ ] [Set ID] [ ] [Data] [Cr]

Data Min : 00 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 100.

Ack

[i] [ ] [Set ID] [ ] [OK/NG] [Data] [x]

APPENDIX

09. Tint (Command: k j)

▶ To adjust the screen tint.
You can also adjust tint in the PICTURE menu.

Transmission

[k][j][ ][Set ID][ ][Data][Cr]

Data Red : 00 ~ Green : 64
* Refer to 'Real data mapping 1'. See page 100.

Ack

[j][ ][Set ID][ ][OK/NG][Data][x]

10. Sharpness (Command: k k)

▶ To adjust the screen sharpness.
You can also adjust sharpness in the PICTURE menu.

Transmission

[k][k][ ][Set ID][ ][Data][Cr]

Data Min : 00 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 100.

Ack

[k][ ][Set ID][ ][OK/NG][Data][x]

11. OSD Select (Command: k l)

▶ To select OSD (On Screen Display) on/off when controlling remotely.

Transmission

[k][l][ ][Set ID][ ][Data][Cr]

Data 00 : OSD off 01 : OSD on

Ack

[l][ ][Set ID][ ][OK/NG][Data][x]

12. Remote control lock mode (Command: k m)

▶ To lock the front panel controls on the monitor and remote control.

Transmission

[k][m][ ][Set ID][ ][Data][Cr]

Data 00 : Lock off 01 : Lock on

Ack

[m][ ][Set ID][ ][OK/NG][Data][x]

* If you are not using the remote control, use this mode. When main power is on/off, external control lock is released.

13. Balance (Command: k t)

▶ To adjust balance.
You can also adjust balance in the AUDIO menu.

Transmission

[k][t][ ][Set ID][ ][Data][Cr]

Data Min : 00 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 100.

Ack

[t][ ][Set ID][ ][OK/NG][Data][x]

14. Colour Temperature (Command: k u)

▶ To adjust colour temperature. You can also adjust Colour Temperature in the PICTURE menu.

Transmission

[k][u][ ][Set ID][ ][Data][Cr]

Data 00: Medium 01: Cool 02: Warm

Ack

[u][ ][Set ID][ ][OK/NG][Data][x]

15. Abnormal State (Command: k z)

▶ To recognize an abnormal state.

Transmission

[k][z][ ][Set ID][ ][FF][ ][Cr]

Data FF : Read

Ack

[z][ ][Set ID][ ][OK/NG][Data][x]

Data 00: Normal (Power on and signal exist)
01: No signal (Power on)
02: Turn the monitor off by remote control
03: Turn the monitor off by sleep time function
04: Turn the monitor off by RS-232C function
05: 5V down
06: AC down
07: Turn the monitor off by Fan Alarm function
08: Turn the monitor off by Off time function
09: Turn the monitor off by Auto sleep function
a: Turn the monitor off by AV Board detect

* This function is "read only".

APPENDIX

16. Auto Configure (Command: j u)

► To adjust picture position and minimize image shaking automatically. It works only in RGB (PC) mode.

Transmission

[j][u][ ][Set ID][ ][Data][Cr]

Data 01: To set

Ack

[u][ ][Set ID][ ][OK/NG][Data][x]

*** Real data mapping 1**

00 : Step 0
⋮
A : Step 10 (Set ID 10)
⋮
F : Step 15 (Set ID 15)
10 : Step 16 (Set ID 16)
⋮
64 : Step 100
⋮
6E : Step 110
⋮
73 : Step 115
74 : Step 116
⋮
C7 : Step 199
⋮
FE : Step 254
FF : Step 255

*** Real data mapping 2**

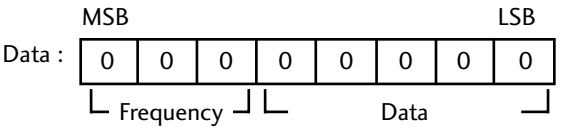
00 :-40
01 :-39
02 :-38
⋮
28 :0
⋮
4E : +38
4F : +39
50 : +40

17. Equalize (Command: j v)

► To adjust equalize.

Transmission

[j][v][ ][Set ID][ ][Data][Cr]



Frequency : 0 120 Hz
1 200 Hz
2 500 Hz
3 1.2 kHz
4 3 kHz
5 7.5 kHz
6 12 kHz

Step (Frequency data):
Refer to 'Real data mapping 3 '.See page 101.

Ack

[v][ ][Set ID][ ][OK/NG][Data][x]

* Equalize command expression

7	6	5	4	3	2	1	0	Frequency
0	0	0						120Hz
0	0	1						200Hz
0	1	0						500Hz
0	1	1						1.2KHz
1	0	0						3KHz
1	0	1						7.5KHz
1	1	0						12KHz

			Step					OSD Value
7	6	5	4	3	2	1	0	
			0	0	0	0	0	-24
			..	..	..	..	..	..
			0	1	1	1	1	0
			..	..	..	..	..	..
			1	1	1	1	1	24

Ex) If you wish to set frequency 500Hz and -20 value on menu OSD,refer to 'Real data mapping 3' and then find Step value for -20.
010 (500Hz)00011 (Step 3)=>01000011 =>43 (Hexadecimal):[j][v][ ][Set ID][ ][43][Cr]

*3 bits of Frequency and 5 bits of Step makes 8 bits (1 byte). Change 8 bits to Hexadecimal code.

APPENDIX

18. Tune Command (Command: m a)

▶ Select channel to following physical number.

Transmission

[m][a][ ][Set ID][ ][Data0][ ][Data1][ ][Data2][Cr]

Data 00 : High channel data
Data 01 : Low channel data
ex. No. 47 -> 00 2F (2FH)
No. 394 -> 01 88 (188H),
DTV No. 0 -> Don't care
Data 02 : 0x00 : ATV, 0x10 : DTV, 0x20 : Radio

Channel data range
Analogue - Min: 00 ~ Max: 63 (0~99)
Digital - Min: 00 ~ Max: 3E7 (0~999)

Ack

[a][ ][Set ID][ ][OK/NG][Data][x]

Data Min: 00 ~ Max: 7DH

19. Channel Add/Skip (Command: m b)

▶ To set skip status for the current Programme.

Transmission

[m][b][ ][Set ID][ ][Data][Cr]

Data 00 : Skip
01 : Add

Ack

[b][ ][Set ID][ ][OK/NG][Data][x]

20. Key (Command : m c)

▶ To send IR remote key code.

Transmission

[m][c][ ][Set ID][ ][Data][Cr]

Data Key code - Refer to page 94.

Ack

[c][ ][Set ID][ ][OK/NG][Data][x]

21. Control Backlight (Command: m g)

▶ To Control the backlight.

Transmission

[m][g][ ][Set ID][ ][Data][Cr]

Data : Min: 00 ~ Max: 64 (*transmit by hexadecimal code)

Ack

[g][ ][Set ID][ ][OK/NG][Data][x]

22. Input select (Command: x b) (Main Picture Input)

▶ To select input source for main picture.

Transmission

[x][b][ ][Set ID][ ][Data][Cr]

Data Structure

MSB LSB

0	0	0	0	0	0	0	0

External Input — Input Number

External Input				Data
0	0	0	0	DTV
0	0	0	1	Analogue
0	0	1	0	AV
0	1	0	0	Component
0	1	1	0	RGB
1	0	0	0	DVI
1	0	0	1	HDMI

Input Number				Data
0	0	0	0	Input1
0	0	0	1	Input2
0	0	1	0	Input3

Ack

[b][ ][Set ID][ ][OK/NG][Data][x]

* **Real data mapping 3(Equalize)**

Step : OSD	Step : OSD
00 : -24	16 : 1
00 : -23	17 : 3
00 : -21	18 : 4
00 : -20	19 : 6
00 : -18	20 : 7
00 : -16	21 : 9
00 : -15	22 : 10
00 : -13	23 : 12
00 : -12	24 : 13
00 : -10	25 : 15
00 : -8	26 : 16
00 : -7	27 : 18
00 : -5	28 : 19
00 : -4	29 : 21
00 : -2	30 : 22
00 : 0	31 : 24

LG Electronics Inc.

UK Only

When does switchover happen?

*Copeland switches on October 17, 2007

The exact date you switch depends on the transmitter you are served by. To check when you switch, go to Digital UK's postcode checker on www.digitaluk.co.uk

Check your ITV news service or look at Teletext page 106 to see what TV region you're in.

Visit us at **digitaluk.co.uk** call us on **0845 6 50 50 50†**

†Calls charged at BT rate of 3p per minute daytime and 1p per minute evenings and weekends. Rates may vary for calls from non-BT lines.

Keep this important information about how to re-tune your TV during the digital TV switchover

Keep this leaflet and your instruction manual safe – you'll need them

get set for digital

Television in the UK is going digital, bringing us all more choice and new services. Starting in late 2007 and ending in 2012, television services in the UK will go completely digital, TV region by TV region.

Please see overleaf to find out when your area switches to digital.

Digital UK is the independent, non-profit organisation leading the process of digital TV switchover in the UK. Digital UK provides impartial information on what people need to do to prepare for the move to digital, and when they need to do it.

How the switchover affects your TV equipment:

Your new TV has a digital tuner built in, which means it is ready to receive the Freeview signal by simply plugging it into your aerial socket (check if you can get digital TV through your aerial now, or whether you'll have to wait until switchover, at **www.digitaluk.co.uk**).

When the TV switchover happens in your area, there are at least two occasions when you will need to re-tune your TV in order to continue receiving your existing TV channels, and also to pick up new ones. Digital UK, the body leading the digital TV switchover, will advise you when you need to re-tune during the switchover.

If you choose to connect your TV to satellite or cable with a digital box then it will not be affected by switchover, and you won't need to re-tune.

How to re-tune:

To find out how to re-tune your TV, check your manufacturer's instructions for details. Or see below for a typical sequence:

1. With your TV in digital TV mode, press 'Menu' on your remote control. (Some TVs will ask you for a code. If you have not already changed it, the default code is usually 0000, or check your instruction book.)
2. From the Menu options on screen, select 'SETUP'. Select 'Auto Tuning'* to re-tune your digital TV (not 'add channels'). You may have to wait a couple of minutes for the re-tune to complete.

*Also sometimes referred to as 'Update', 'Rescan', 'Replace', 'Auto-Tuning', 'Channel Search', 'First Time Install', or 'Store Channels'.

3. If you do not re-tune your channels when advised to do so by Digital UK, you may lose some or all of your channels until you do re-tune. You should re-tune your TV every few months to check for any new channels.

If you are missing any channels, it may be that they are not available in your area, or that your aerial needs upgrading.

If you have any questions, please contact your equipment supplier or call Digital UK on **0845 6 50 50 50** or visit **www.digitaluk.co.uk**